JUL 12 1926

PAPER TRADE JOURNAL

Vol. LXXXIII, No. 2 JULY 8, 1926 Per annum, $4.00 Per copy, 10 cents

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VACUUM PUMPS AND COMPRESSORS

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PAPER TRADE JOURNAL
ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-FIFTH YEAR

Published Every Thursday by the

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TABLE OF CONTENTS

Copyright, 1926, by Lockwood Trade Journal Co., Inc.

Paper Mill Production for May Shows Decrease.... 27
A. P. P. A. Plans for 50th Anniversary 27
Philadelphia Slightly More Active 28
Mill Superintendents Postpone Meeting 29
Prospects for New Paper Mill in Alaska 29
Sidney Paper Box Co. Incorporated..... 29
Good Progress on Gatineau Mill 30
Rayon Prices and the Pulp Industry 30
Developments in Shawinigan Co. 30
Ranier Pulp Co. Begins Building 30
Paper Business Declines in Chicago 32
Champion Paper Co. Going Strong 32
Moving Pictures Show Romance of Paper 32
Island Paper Co. Mill to be Sold 34
De Pere Mill Probably Not to be Sold 34
Nekoosa Mill Wins Safety Contest 34
Toronto Paper Market Continues Spotty 36
Survival of the Fittest 38
Island Paper Mill May be Operated Again 40
Miniature Paper Machine Made in France 40
Construction News 42
Trade Mark Department 44
Obituary 46
Important Pulp Consolidation 48
New York Trade Jottings 50
Editorial **52**
Louisiana Paper Co. to Build 53
Watervliet Paper Co. Issues Bonds 53
Technical Section
The Origin of the Paper Machine 55
Current Paper Trade Literature 56
Observations on Operating Economy of the Roofing Felt Industry 57
Bleaching Wood Pulp 59
Rosin Oil Soap 60
Progress in White Water Reclamation 64
Cost Section **65**
Progress in Standardizing Tissue 69
New York Market Review **74**
Miscellaneous Markets **76**
Market Quotations **78**

Want and For Sale Advertisements, 82, 83, 84, 85

THE steel used in Dowd knives gives them an edge which does not require frequent grinding. The Dowd process of heat treating assures even temper the full length of the knife—no soft spots. Knives stay sharp even when in operation for long periods cutting different weights of stock. The precision and ease with which Dowd knives sever a lift of stock, without squeezing or causing the sheets to differ in straight edge or size is remarkable. Satisfactory pe formance is guaranteed under all cutting conditions as long as the knife is in use in your shop.

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PAPER TRADE JOURNAL

With Which Is Combined

PAPER

The Magazine of the Paper Industry

Vol. LXXXIII, No. 2 — Thursday, July 8, 1926

Paper Production for May Shows Slight Decrease

According to Figures Just Issued by the American Paper and Pulp Association, and Co-operating Organizations, Production for the Month Was 3 Per Cent. Less Than in April — Wood Pulp Production for the Corresponding Period Showed a Decrease of 2 Per Cent. For Practically All Grades

The May production of paper in the United States as reported by identical mills to the American Paper and Pulp Association and cooperating organizations, showed a decrease of 3 per cent as compared with April's production, following a 5 per cent decrease in April over March, according to the Association's Monthly Statistical Summary of Pulp and Paper Industry. All grades showed a decrease in production as compared with April, with four exceptions.

The Summary is prepared by the American Paper and Pulp Association as the central organization of the paper industry, in cooperation with the Binders Board Manufacturers Association, Converting Paper Mills Association, Cover Paper Association, News Print Service Bureau, Wrapping Paper Manufacturers Service Bureau, Writing Paper Manufacturers Association and Paperboard Industries Association.

The figures for May for same mills as reported in April are:

Grade	Number of Mills	Production Net Tons	Shipments Net Tons	Stocks on Hand End of Month Net Tons
News Print	71	141,032	142,294	18,207
Book	62	90,551	86,289	44,129
Paperboard	114	178,216	176,776	45,845
Wrapping	78	46,506	45,985	39,483
Bag	27	12,464	11,771	10,640
Fine	87	31,417	30,260	40,832
Tissue	47	14,729	13,465	17,780
Hanging	9	4,775	4,002	4,165
Felts	14	12,250	12,114	2,911
Other Grades	67	23,756	23,096	17,039
Total—All Grades.		555,696	546,052	241,031

During the same period, domestic wood pulp production decreased 2%, this decrease being distributed over all grades, with one exception. The May totals (mills identical with those reporting in April) as reported by the American Paper and Pulp Association, are as follows:

Grade	No. of Mills	Production Net Tons	Used Net Tons	Shipments Net Tons	Stocks on Hand End of Month Net Tons
Ground Wood Pulp	95	117,927	97,238	3,258	148,360
Sulphite News Grade	36	41,144	36,114	4,575	10,281
Sulphite Bleached	21	23,265	19,278	3,965	3,145
Sulphite Easy Bl.	5	2,924	2,399	643	697
Sulphite Mitscherlich	6	6,694	5,371	1,052	609
Sulphate Pulp	9	14,096	12,573	1,553	1,622
Soda Pulp	11	18,144	13,718	5,030	2,287
Other than Wood Pulp.	2	63	53	....	20
Total—All Grades...		224,257	186,744	20,076	167,021

Plans For the 50th Anniversary

The 50th anniversary of the organization of the American Paper and Pulp Association will be celebrated during Convention week, February 21 to 24, 1927. The Executive Committee of the Association authorized the appointment of the following representative committee to handle the details of the anniversary celebration with the thought that it should be carried out in such a way as to emphasize as never before, the important place which the industry occupies in American industrial life and the Association in the industry.

The 50th Anniversary Committee is as follows:

D. C. Everest, Marathon Paper Mills, Rothchild, Wis.; Louis Bloch, Crown Willamette Paper Company, San Francisco, Cal.; Wm. F. Brunner, Paterson Parchment Paper Company, Passaic, N. J.; Winthrop M. Crane, Jr., Crane Co., Dalton, Mass.; Geo. S. Holmes, Brown Paper Mill Company, West Monroe, La.; J. P. Hummel, Hummel-Ross Fibre Corporation, Hopewell, Va.; Geo. H. Mead, Mead Pulp & Paper Company, Dayton, Ohio; H. A. Moses, Strathmore Paper Company, Mittineague, Mass.; Reuben B. Robertson, Champion Fibre Company, Canton, N. C.; Norman W. Wilson, Hammermill Paper Company, Erie, Pa.

There are but few trade associations older than the American Paper and Pulp Association. It is doubtful if there are any, of a national character, which so fully represent their industry, or whose organization enables them to present so united a front on matters of vital interest to their industry as does the American Paper and Pulp Association.

The work of the Association has been progressing steadily until now it is recognized in Washington, at the various state capitals and in Europe as the Central organization of the pulp and paper manufacturers and converters of the United States. Its support by the industry and its accomplishments have given it a prestige which merits a fitting celebration of its 50th anniversary.

Daring Paper Mfg. Co. Makes Improvements

[FROM OUR REGULAR CORRESPONDENT]

BRIDGEPORT, Pa., July 6, 1926.—The C. B. Daring Paper Manufacturing Company, has closed down its mill for general repairs, alterations and new equipment, and expects to resume operations about July 12, after which time the company will manufacture various specialties,—such as coating papers, saturating papers, light weight board, and special papers to order, as well as the former lines of white and colored bogus bristol and chocolate layer board, which will also be of better quality stock than formerly.

The company has a four cylinder 72-inch trim machine with ample beater and jordan capacity to manufacture about ten tons of paper per day. A complete line of new samples will be available the latter part of July.

C. B. Daring is sole owner of the company, and M. R. Ware, formerly of Baltimore, Md., is superintendent.

Philadelphia Market Slightly More Active

Improved Demand Results in Steadier Prices for the Various Grades—Better Feeling Experienced in Fine Paper Division—Hot Weather Specialties Bright Particular Feature of Coarse Paper Section—Lower Grades of Rags and Waste Paper Firmer

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., July 3, 1926.—A slightly more active market for the distribution of all grades of paper was noted in the earlier days of the week. With improved demand, the prices of papers firmed from the lower levels to which some of the grades were reduced in the duller days of the mid June month. While the improvement was slightly better than the preceding week, it was not near the normal trend which should prevail at this season for many of the grades customarily active at this time.

Fine Papers Show Slight Improvement

Fine papers were in greater demand with most of the grades sought in the lines adapted for the mid year recording of accounts and the inventory of stocks. While this change for the better is believed to be temporary, and due solely to the closing of the half-year's accounts, the dealers are looking forward to a gradually upward trend in demand for all grades after the holidays. Manufacturers of fine papers, such as books, bonds, cover papers, and announcement stocks, in this vicinity, are producing only for the moment's needs, and are not anticipating extensive orders before the latter part of the month. Volume buying from the manufacturers is conspicuously absent, all orders on hand being limited to immediate requirements or for a few weeks ahead at the most. While mills in the local territory find the demand limited to small orders, the broadening of small lot purchases is an encouraging factor that leads to belief that business, in so far as the manufacturers are concerned, is beginning to expand. Prices on all grades of fine paper have been holding firmly, with the exception of a few recessions in the quotations on some of the cheaper grades of sulphites.

Seasonal Markets for Coarse Papers

While the market for coarse papers has been gradually dwindling to a seasonal affair, the past week had a brighter side in the quickening of business in a few grades of wrapping and specialties consumed by the mercantile trades busily engaged in the holiday demands for clothing and other merchandise for the vacation days. Seasonal specialties for hot weather needs continued to be the most active of the lines, and are in increasing demand. Cups, waxed products, ice cream containers, and commodities for the soda fountain, were moving in larger volume, along with towels and outing paper requirements. A firming in quotations was noted with the withdrawal of the mill offerings made within recent weeks for a large amount of paper of varied grades that came into the Philadelphia trade by some of the nationally prominent manufacturers, and a couple of smaller producers of kraft of high quality. With these mill offerings off the market, prices returned to the firmer and stabilized quotations which prevailed in the early part of the year. Dealers are now confident that the price of kraft will hold more firmly and, if anything, will be advanced rather than reduced as the summer months grow. Manufacturers representatives who have been calling on the trade in the past week report that production is limited to immediate orders, and that mills hereabouts are not producing for future stocking.

Wholesale Waste Merchants to Hold Outing

With the call of the wide open spaces to lure the wholesale waste merchants to holding their quarterly gathering outdoors, the first of the annual outings to be instituted in substitution of an indoor summer session will be given on Thursday of this week by the Philadelphia Wholesale Waste Merchants Association, at the North East Shrine Club At the meeting of the officers held last Thursday, it was decided to substitute the annual outing for the summer gathering. A committee of two, including Secretary William J. McGarity, Sr., of the association, and head of the Penn Paper and Stock Company, and Thomas Kenny, of the International Trading Company, was appointed to complete arrangements for the first outdoor event to be held by the united waste trades. A program of sports, including baseball, novelty races, quoits and other outdoor diversions, has been arranged to take place on the spacious grounds surrounding the Shrine Club. A dinner will be served to the sixty members participating, who will motor from Philadelphia to the Club.

Paper Stock Shows Improvement

Demand for rags and paper stock shows an improved mill business and possible resumption of manufacture in the larger centers of paper making activities. Prices of the lower grades are advancing slightly, as the demand broadens. There is no accumulation in the warehouses, so that even higher prices are likely to prevail before the month ends.

Paper Men in Bridge Opening Ceremonies

As head of the Transportation Committee of the Philadelphia Council, President Simon Walter, of S. Walter, Inc., 141 N. 5th street, was among the honored members of the municipal party headed by Mayor W. Freeland Kendrick, of Philadelphia, who took part in the opening ceremonies of the Philadelphia-Camden Bridge, which was thrown open to traffic last Thursday. With Governor Pinchot of Pennsylvania, Governor Moore, of New Jersey, and the Mayors of Camden and Philadelphia, Mr. Walter occupied the Speakers platform erected on the site of the bridge especially for the elaborate ceremonies associated with the opening, and attended by thousands of spectators from both states. Others in the paper trade who were invited to participate in the ceremonies by the Bridge Commission were Vice President Thomas F. Kennedy, of the Walter company, and its Secretary, Harry Lefkowith. The Walter company is in direct line of communication with the Bridge, being just a half square below the Philadelphia opening to the great span, the largest single suspension bridge in the world.

Another paper house which will come in for increased value in property and perhaps in business, because of its proximity to the Bridge is the Philadelphia Paper Manufacturers Company, at 5th and Willow streets, which a short time ago constructed a half million dollar building near the site of the new traffic artery between the two states. The large electric sign which adorns the top of the Philadelphia Paper Manufacturers Company, is an excellent advertising medium for the firm, as it can be viewed for several squares on all sides and from the bridge.

Paper Houses Benefit from Bridge Traffic

Opening of the new traffic highway between this city and Camden will materially benefit the paper trade, for it is in line of direct communication with Paper Row and Sixth street from Race to Walnut. The proposed opening of a wide avenue between the bridge and the main thoroughfare on Market street will carry the traffic directly through Paper Row and afford excellent business advantages to the numerous paper houses situated along the way on both sides of the street and adjoining cross town avenues.

Jessup and Moore Co. to Operate New Machine

The newly installed machinery in the paper making plant of the Jessup and Moore Paper Company, of Philadelphia and Wilmington, Del., will be placed in operation during the month. The new

machine has been installed in the Augustine Mill in Wilmington, and was erected at a cost of $250,000, while other plant extensions involved an expenditure of $300,000. With the new plant activity, the Jessup & Moore company will be provided for an increase in production of possibly a quarter million dollars cutput. The construction of the new machine and building to accommodate it was part of the modernizing plans which were started during the winter months for the Augustine Mills. The entire extensions and innovations were effected throughout the last six months, and were made at an expenditure of $550,000. They will provide one of the most modern and best equipped paper manufacturing plants in the country for the Jessup and Moore company.

Mill Superintendents Postpone Meeting

While it had been planned to hold a local meeting of the Pennsylvania and New Jersey Mill Superintendents Association shortly after the national convention held in Detroit a few weeks ago, the plan has been abandoned at this time, and will be supplanted by a gathering to take place in the fall. President J. Garfield Ramsey, of the local organization, who attended the national convention as representative of the recently organized new group of mill superintendents, is now back at his duties at the Dill and Collins Company, Manayunk Mills, and announces that the session will be held in late September, when a report will be made on the convention activities.

New Owners Take Possession of Board Mills

On July 1, the consolidated Philadelphia Paper Manufacturing Company and the Chicago Mill and Lumber Company became actively engaged in the manufacture of paper boards and containers under the newly organized Container Corporation of America. The plant of the Container Corporation, formerly the mills and plant of the Philadelphia Paper Manufacturing Company in the Manayunk district was viewed during the week by the new owners, who journeyed here from Chicago under the direction of the new president, Walter P. Paepke, and went over the plant and grounds of the corporation. While no definite information could be learned of the plans of the former president of the Philadelphia Paper Manufacturing Company, it has been rumored that he will retire from the trade, along with the other officers of the company.

W. S. Wilcox to Sail for Europe

Plans for a trip abroad will become effective on Saturday of this week, when W. S. Wilcox, of the Wilcox, Walter, Furlong Company, will sail from New York for a six weeks sojourn in foreign parts on a combined business and pleasure tour. Mr. Wilcox will be accompanied by Mrs. Wilcox and a party of friends.

Poor Richard Club Honors Paper Men

While the newly elected president of the Poor Richard Club, the fraternity of advertising men in this city, who was inaugurated in his office with appropriate ceremonies during the week, is a paper man, other members of the trade were equally honored as participants in the recent international convention of the Associated Advertising Clubs of the World, by awards for their zeal in promoting the successful program which was held throughout the entire week of the convention. On Thursday, President Morton Gibbons Neff, of the Poor Richard Club, who recently was elected to the highest office in the Club, was the honored guest at the dinner given by his associates among the advertising men, and those paper dealers who are affiliated with the organization, and was inducted into office with appropriate ceremonies and eulogies from the speakers. The dinner to the president was served on Thursday evening while the paper men were feted on the preceding day, when President George W. Ward arranged a surprise affair for the purpose of rewarding his associates through the Club.

The dinner was held at the Poor Richard Club, on Locust street, near 13th, with Karl Bloomingdale presiding. Other paper men who were given awards for their activities on the various committees that arranged the convention, were President Norbert A. Considine, of the Paper House of Pennsylvania, a former vice president of the Poor Richard Club, who recently resigned the office because of poor health, and his brother and business associate, Raymond J. Considine, who was chairman of the parade committee depicting the history of advertising from its earliest days down to the present times, both receiving white gold belt buckles, Clyde Cobaugh, of Satterthwaite and Cobaugh, and Raymond Christine, of the Raymond and McNutt Company, who were on the Reception Committee.

Red Men Honor A. Clarence Holland

Additional honors were conferred on A. Clarence Holland, general manager of the S. S. Garrt Company, 3rd street, above Spruce, when the recent national convention of the Red Men met in this city. A silver service was awarded to Mr. Holland by the national membership of the organization, as a token of recognition for their esteemed associate and past Grand Sachem of the order, and his service in behalf of the fraternity.

News Notes of the Trade

President John H. Sinex, of the Garrett-Buchanan Company, left this week for a summer vacation in the Maine resorts. He will remain until after the middle of September.

President George W. Ward, of the D. L. Ward Company, journeyed to the headquarters of the S. D. Warren Paper Company in Boston, in company with W. H. Hentz of the firm, and are remaining in the northern state until after the holiday.

Leo F. Supple, treasurer of the Whiting Paterson Company, who has been spending the past fortnight at his home in Holliston, Mass., will be back at his desk after the 4th.

William Spear, who represents the Analomink Paper Company, of North Water Gap, Pa., made the rounds of the trade during the week, and reported the mills to be working on full time and well booked with orders.

Another trade visitor was C. Scott, of the Bayless Manufacturing Corporation, of Austin, Pa., who called on the dealers in the local field.

Prospects for New Paper Mills in Alaska

PETERSBURG, Alaska, June 22, 1926.—Both Bart L. Thane, managing director of the Alaska Gastineau Gold Mining Company, and B. F. Heintzleman, assistant district forester, came North on the Yukon recently, confident that Southeastern Alaska would have a real pulp industry started within the next few months.

Mr. Thane has been devoting much of his attention for some time toward the utilization of the hydro-electric development of his company, located at Juneau, for the purpose of manufacturing paper and pulp and chemical fertilizer.

He will be followed north by Retel McBain of Portland, Ore., and Howard S. Taylor, of Cleveland, Ohio, both famous paper engineers.

Mr. Thane says several Pacific Coast newspaper owners have determined to enter the pulp and paper manufacturing business, and they are favorably considering Alaska though Puget Sound and Oregon interests are endeavoring to direct their activities in their direction.

He is confident that Juneau will soon be the center of a large pulp and paper industry in Alaska. It is too early, however, he says, to announce the details of the present status of the negotiations.

Sidney Paper Box Co. Incorporates

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, July 6, 1926.—The Sidney Paper Box and Novelty Company of Sidney, Ohio, was incorporated the past week by George L. Gagoudy, S. V. Williotts, Taylor Cummins, J. H. Koenle and D. C. Warner. The capital stock is $25,000.

The company will enter into the manufacture of boxes and novelties and will install a modern plant. Already a good-sized business has been developed but it is planned to extend the scope of this trade. There are few paper industries in Sidney, which, however, is one of the best manufacturing towns for its size, in Ohio.

I. P. Makes Good Progress on Gatineau Mill

Plant Will Contain Four of the Largest Paper Machines in the World and Will Have Capacity of 450 Tons Daily—Common Stock of Shawinigan Water and Power Co. Passes 200 Mark—Gaspe Peninsula To Be Mapped From Air

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., July 6. 1925.—Construction of the first unit of the new mill of the International Paper Company at Gatineau, Que., is progressing satisfactorily. The mill will contain four paper making machines of a total capacity in excess of 450 tons daily. The machines, it is stated, will be the largest in the world. The power will be supplied by the three hydro-electric plants which the Company is building at Farmer's Rapids, Chelsea and Paugan Falls, on the Gatineau river, which will have an initial capacity of some 400,000 h. p.

It is from these plants that the Ontario Hydro-Electric Power Commission has contracted to purchase some 260,000 h. p., the contract being one of the largest ever made for the sale of power.

The Gatineau watershed is largely covered with timber, and the existing lake area exceeds 400 square miles, conditions should naturally lend themselves to the creation of storage. The company is developing storage in Lake Baskatong with capacity of more than 82,000,000,000 cubic feet. The length of this lake will be increased to about 55 miles, and its surface area to about 107 square miles, or about 2½ times as large as Lake George in the Adriondacks, and one-third larger than Lake Winnipiseogee, in New Hampshire. The following table indicates how initial installation of the Gatineau Power Company will compare in size with present installed capacities of other large hydro-electric developments:

	Horse-Power
Gatineau Power Co. (initial)	380,000
Niagara Falls (Can. side)	950,000
Niagara Falls (Amer. side)	452,000
Duke-Price Power Co	450,000
Muscle Shoals	256,000
Mississippi River Power Co	150,000

While the initial development of the Gatineau may be slightly less than 400,000 horse power, provision will be made for a considerably larger ultimate capacity.

The price to be received by the International Paper Company from the Ontario Hydro Commission will be $15 per h. p., at the point of delivery, giving the company an annual revenue from this source of between $3,450,000 and $3,900,000.

Rayon Price and Pulp Industry

An announcement of interest to the pulp industry here is that the leading rayon manufacturers, Courtaulds and the Viscose Company have announced a reduction of from 25 cents to 35 cents a pound on rayon, according to quality, which follows a cut of 75 cents a pound last February. It is held here that this will not prejudicially affect the market for the special sulphite pulp used as a raw material, but that, on the contrary, a general increase in the consumption of rayon fabrics will result, which, of course, will mean a greater demand for pulp. It is also held that the price of the latter is not likely to be affected by the downward revision in the market price of rayon. This may seem peculiar, but an authority on the Canadian pulp market claims that the reason for this lies in the fact that the cost of the pulp as a raw material forms a very well part of the total cost of the finished article.

Developments in Shawinigan Co.

There has been a striking advance in the price of the common stock of the Shawinigan Water and Power Company on the Montreal Exchange during the past week, the stock having reached and passed the 200 mark. This has given rise to many rumors regarding alleged pending power developments, one of which is that the Company may purchase the Laurentide Power Company, a subsidiary of the famous paper-making concern, the Laurentide company. It is also said that the Company is negotiating for the acquisition of a huge power development in the vicinity of Montreal. Out of it all there has risen the conviction that the Company will extend the power activities in addition to the already enormous water power resources which it controls, and that the shareholder will benefit by a new stock issue.

Penny Postage Again

On July 1, Dominion Day, penny postage was restored in Canada, or at least partly so. Postage to the United States is now 2 cents per ounce instead of 3 cents for the first ounce, while postage to Great Britain is 3 cents instead of 4 cents. Penny postage was discontinued in Canada in 1916 by the imposition of a one cent war tax on the first ounce on all letters.

Famous French Airman To Map Quebec

Count de Lesseps, famous French airman, has arrived here to take charge of flying operation in connection with experimental mapping for the Provincial Government of Gaspe Penninsula, Quebec, which is understood to be the first step in mapping the whole of the Province from the air. The Count is accompanied by Georges Ravit, of Paris, one of the greatest European experts in aerial photography, and general secretary of the Companie Aerienne Francais, who will place his knoweldge of the latest technical methods at the disposal of the Government and carry out the topographic operations in collaboration with the Government's surveyors. Another air pilot, mechanics, etc., complete the staff. A hangar has been erected on the shore near Gaspe village, to house two light F. B. A. planes, one of which has just arrived from France. Photographic operations will be carried on from an altitude of 10,000 feet. In photogrphing a lens with a focal length of 10 inches will be used, and a device for changing the film called an aerophote, by which a film is automatically changed.

Ranier Pulp Co. Begins Building

SHELTON, Wash., June 30, 1926.—It is now assured that the two construction contracts for the first unit of the new paper mills at Shelton have been authorized, and fall to two Port Angeles firms who are already engaged in large contracts for the Washington Pulp and Paper Company, which is an allied concern to the Rainier Pulp and Paper company to operate here.

Owens Brothers have already begun operations in the driving of 4,000 piles required for foundations, and Chris Kupper & Sons are preparing to start work on the concrete building to be 110 x 1,500 feet as soon as concrete is poured into the funnel and forms raised. The contracts cover the first mill unit, which is to be turning out pulp board by April 1, 1927, and other contracts will follow toward the complete plant, which is to manufacture finished book and bond papers, which require about two years' work.

The Reed-McCleary mill power plant is installing a third turbine of 5,000 kilowatts to furnish the additional electric power required for the paper mills, and for the new Reed cedar shingle and log mill of 150,000 daily capacity, on which the Hart Construction company driver is now at work setting the piles.

Raw Materials of Proven Reliability

Liquid Chlorine
Bleaching Powder
Caustic Soda
Solid-Flake-
Ground-Liquid
Soda Ash
Aqua Ammonia—26°

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Aqua Ammonia

Deal Direct with the Manufacturer

Uniform Materials Make Uniform Products

Paper Business Declines Somewhat In Chicago

While Buying Has Diminished, Most Paper Organizations Are Still Ahead of Last Year's Sales Record—Supply of Southern Kraft Said to Exceed Demand, and Price May Drop Back to Old Figure—Paper Board Tonnage Moving More Freely

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., July 3, 1926.—Two weeks ago there was hope, with apparently some justification for it, that the fine paper trade might be fortunate enough to glide through the summer months with at least enough activity to keep it awake. Random orders here and there stirred up things sufficiently to keep salesmen optimistic enough to say: "Well, it could be worse."

Today even random orders are conspicuous by their absence, and for the first time this year some grumbling is being heard. Demand throughout the year has been erratic, anyway, and probably is without precedent. The year opened with a fervor of buying, which was unabated until it began to diminish fully a month sooner than customary. Most paper houses are still ahead of last year's sales for the first five months, even though the bulk of the business was transacted early in that period.

Champion Paper Co. Going Strong

Right now nearly every handler of fine paper in Chicago needs business—some of them need it rather badly, a number of executives admit. For this reason the eyes of a considerable portion of the trade are turned to the Champion Coated Paper Company, 111 W. Washington street, which is doing a humming business just as though there was no such thing as a dull season on hand. "How do you do it, Bob?" ask fellow paper men; and Robert Butterworth, with his usual modesty, replies: "Well, I know we are the exception," and lets it go at that.

The Champion concern has been doing some very interesting publicity work of a character calculated to enlighten the layman on paper making, and our guess is that the firm is reaping the benefits of such enterprise, and is realizing that "It Pays to Advertise"—the right way.

Speaking of advertising, why do not more paper manufacturers and jobbers try to put real human interest into their publicity efforts? They spend enough money on direct-by-mail solicitation, goodness knows. Their screaming bargain lists clutter mail boxes already jammed full of mail-order appeals based mostly on price, most of which, sad to say, goes into the waste baskets. Just stand by for a paragraph or two, and your scribe will tell you how Butler's is blazing a new publicity trail.

American Writing Outlook Brighter

The local paper industry is extending congratulations to the members of the Chicago branch office of the American Writing Paper Company, because of the new plan of reorganization which has been adopted under the receivership. Paper men, being good sports, have sympathized with the American company representatives and have appreciated the difficulties under which they have labored.

This great concern has been operating its huge mills profitably and paying its bills promptly for the past two years, even though hampered by receivership; but no organization so situated can obtain its full share of business, for the reason that its customers are not fully convinced as to its permanency, and hesitate to stock up on lines that may be withdrawn in case operations are closed down.

A. N. Forsythe is manager of the Chicago sales office of the American Writing Paper Company, and is assisted by W. H. Shine. Business at this branch is seasonably quiet, but not altogether as lacking in volume as some other concerns report with reference to their condition. At a time when so few orders are being picked up by the trade, competition is always most pronounced, and the competition of sulphite paper is naturally hurting the rag bond market. To offset this competition, the American concern is favorably situated, because of its big tonnage shipments and prompt delivery. The Chicago staff feels certain that it will be in a much better position when the settlement in receivership is in operation.

During June parchment paper was in excellent demand, but sales have already shown a slowing-up tendency. Sulphite bond was in fair demand, but there is nothing remarkable about its position now.

Moving Pictures Show Romance of Paper

The Butler Paper Company is featuring a publicity stunt this week that undoubtedly will boost its own sales and add immensely to its good will, as well as stimulate interest in paper in the public mind in such a way as to benefit the entire local industry. This consists of a moving picture demonstration in the large display window of the Kardex Rand Sales Corporation, 216 W. Monroe street, which is directly across the street from the Butler headquarters.

The pictures, in three reels, each requiring fifteen to eighteen minutes to run through, are entitled "The Romance of Paper" and are revealing to throngs of people who gather about the window in this crowded downtown location just how paper is manufactured, packed and shipped. Even your scribe, who professes to be somewhat hard boiled in publicity matters, was fascinated by what transpired on the little 36 by 36 inch screen. The picture begins by showing a few scenes where paper is in abundant evidence—a library, a reading room, etc. Then a brief reference is made to ancient paper making methods—the Egyptian papyrus made of reeds, and parchment of sheep skins.

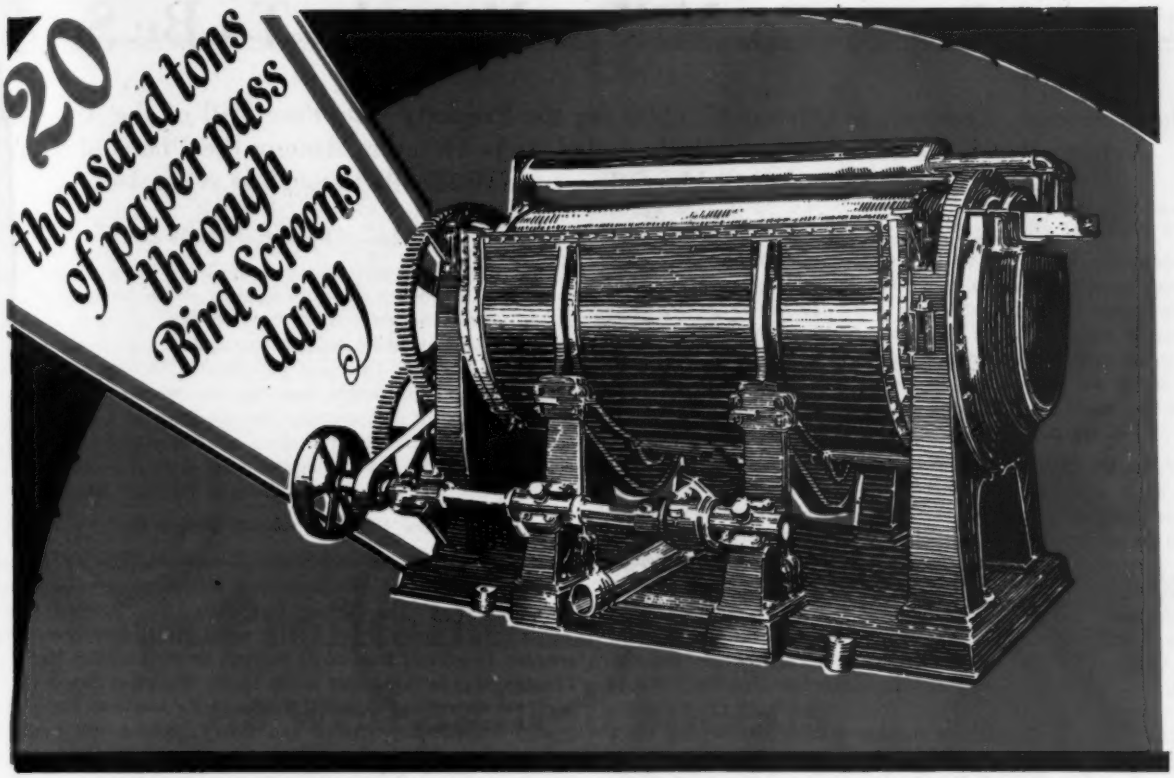
Paper, the public is informed (many for the first time, no doubt), is produced by isolating fibers of vegetable matter, and then putting them together again in the form of paper. The hand mold method of early days was shown, so as to compare it with the modern machinery system. The public then learned how rags are gathered, cleaned and cut into small squares, mixed with lime and soda ash, boiled to a pulp, drained, and so on to the finished product.

The making of wood pulp paper begins with the tree marker in the woods, who is followed by the axe and saw gang. Barking of trees in the forest, cutting into lengths, skidding over icy roads to tumultuous rivers which carry the logs to the downstream paper mill, and even the dynamiting of a log jam, is drawing crowds of keenly interested spectators about the window for the ten days of the picture demonstration.

Shipment of logs by rail, unloading by locomotive crane, dumping into "hot" ponds to soften the bark of those not skinned in the woods, conveying to the battery of saws, barking by machinery, splitting of the larger bolts, feeding bolts to grinders, sulphite treatment of the fiber, the cooking process, screening the pulp, a close-up of a bleaching demonstration in the Butler laboratory, taking out the moisture, forming into pulp sheets, flattening, refining and so on down to wrapping and shipping—all of this is holding crowds spellbound.

But this free moving picture show does more than merely entertain. It gives many thousands of people an insight into paper

(Continued on page 46)



Something to think about

BIRD MACHINERY

¶ The cleanest and best papers made in this country and Canada are screened through Bird Screens. ¶ The capacity of Bird Screens in terms of daily or yearly output is unsurpassed. All recent production records of the huge Canadian newsprint mills have been made by machines equipped with Bird Screens. ¶ Operating cost is so low as to be almost negligible. ¶ Roughly, two-thirds of the paper produced on this continent passes through Bird Screens. ¶ Are you using Bird Screens?

BIRD MACHINE COMPANY
South Walpole, Massachusetts

6252

BIRD SCREENS

Island Paper Co. Mill at Menasha To Be Sold

Hugh Strange, Receiver, is Offered $75,000 for the Property—De Pere Mill of the American Writing Paper Co. Not Likely to Be Included, It Is Thought, Among the Plants of the Company That Are to Be Sold—Salesmen of the Tuttle Press Meet at Appleton

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., July 6, 1926.—Sale of the Island Paper Company's plant at Menasha, Wis., for $75,000 is one of the possibilities that faces Hugh Strange in his capacity as receiver. An offer of this amount has been made for the defunct plant and at a recent meeting of creditors Mr. Strange was authorized either to accept this price or sell the mill at auction. No announcement has been made as to the final disposition of the matter.

De Pere Mill Will Probably Not Be Sold

When the American Writing Paper Company disposes of some of its 28 plants as announced by the receiver, Sidney L. Wilson, New York, there is little possibility that the mill at DePere, Wis., will be among those placed on the market, according to Charles E. Garvin, superintendent. The DePere plant is the only one the company has outside the New England territory and it is believed the owners will want to hold it because of its valuable water-power and the saving in freight on shipments to the Chicago, St. Louis and West Coast markets. The fact that no appraisal has been ordered leads Mr. Garvin to conclude that there will be no change.

The DePere mill has been running without interruption for a year, and closed down for a few days during the week of June 21, when the market slackened. It is believed that part of the sum of $1,250,000 authorized by the receiver for improvements will be used at the DePere plant.

Nekoosa Mill Wins Safety Contest

The Nekoosa mill of the Nekoosa-Edwards Paper Company has won the safety contest conducted by the company for the first six months of this year. Eight hundred dollars out of the prize money of $1,600 is to be devided among approximately 400 employees of that mill. Employees in departments of both the Nekoosa and Port Edwards mills where there have been no accidents will have the other half of the money divided between them. Ten accidents occurred during the contest, six at Port Edwards and four at Nekoosa.

A. N. Strange Injured in Automobile Accident

While A. N. Strange of Neenah, Wis., was returning from his daily trip to the Wolf River Fibre and Paper Company mill at Shawano, Wis., several days ago his automobile was struck by a heavy truck. Mr. Strange was injured internally but is recovering. The accident occurred at Appleton, Wis. Mr. Strange is president of the Shawano company and also of the Island Paper Company, Menasha, and several other paper concerns.

Wedding Bells in Badger Circles

Wedding bells have been ringing in Badger paper mill circles. John Babcock of Stevens Point, Wis., was married a week ago to Miss Marion Harmon of Oshkosh, Wis. Mr. Babcock is the son of Charles Babcock of Neenah, president of the Wisconsin River Pulp and Paper Company, of Stevens Point, and his bride is the daughter of Mr. and Mrs. John C. Harmon of Oshkosh. The marriage was one of the brilliant social affairs of the Oshkosh social season. Another wedding of prominence was that of Theodore Markley Gilbert of Neenah, Wis., and Miss Ruth Dickinson of Appleton, Wis. The ceremony took place recently at the home of the bride's mother. Mr. Gilbert is treasurer of the Gilbert Paper Company at Menasha, and Mrs. Gilbert is the daughter of the late C. S. Dickinson, president of the First Trust Company of Appleton. The couple will reside at Neenah.

Pulpwood Received from Sweden

Wisconsin paper mills received pulpwood from Sweden last week under a rather unique arrangement, when for the first time a ship brought the raw material direct to their doors, so to speak. The tramp steamer Rein brought its cargo of 15,000 tons through the Great Lakes-St. Lawrence waterway to Milwaukee, where it was reloaded onto freight cars for the remaining short haul. Other ships in the pulp carrying fleet are expected to arrive daily, giving a service that the Wisconsin mills have been endeavoring to obtain for some time. Ships carrying china clay from Fowey, England, also will dock at Milwaukee in the near future.

Now Dizon Wholesale Supply Co.

The Janesville Paper and Supply Company moved its business on July 1 to Madison, Wis., according to announcement of Philip Dizon, president. The company has taken over a fireproof building on East Dayton street. After seven years' development the company found that most of its business centered around Madison. The name has been changed to the Dizon Wholesale Supply Company, but the management still will be in the hands of Philip and Stanley Dizon. Roy Arnold and Harry Sheldon will continue to have charge of the Janesville territory and will add southern Wisconsin. E. S. Arbour will represent the company in Eastern Wisconsin.

General News of the Trade

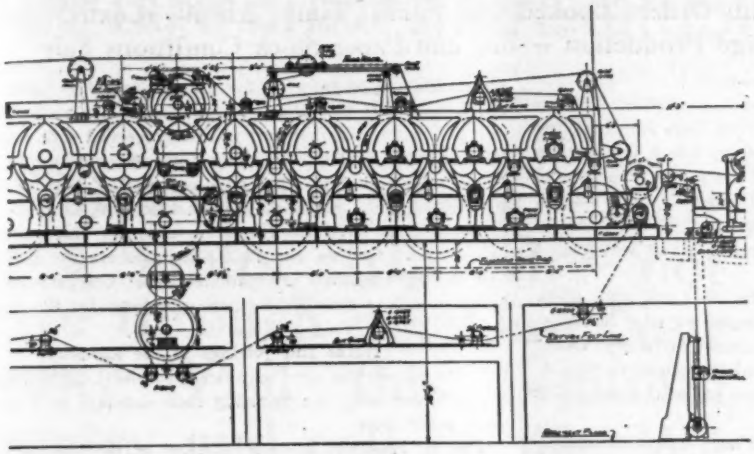
Articles of organization of the Imperial Paper Products Company of Menasha, Wis., have been filed at Oshkosh, Wis. The authorized capitalization is $10,000 and the incorporators are George P. Pierce, H. E. Landgraf and T. E. McGillan, of Menasha. The company is empowered to manufacture and sell embossed and glassine paper and other articles made of pulp.

Peshtigo Paper Company, Peshtigo, Wis., has added A. M. Dohr to its sales staff in the Northern Wisconsin and Upper Michigan territory. He formerly was on the clerical staff and is succeeded by Reeves Comfort.

Fire destroyed one of the frame sheds at the plant of the Eau Claire Paper Box Company, Eau Claire, Wis. The damage was nominal.

Ten grades of paper and their value to the printing trade are described in a unique book issued by the Gilbert Paper Company, Menasha, Wis. Each of its watermarked brands is described and various processes in the plant are shown by pen and ink sketches. The book is said to be the first ever compiled to include information so broad in scope.

Accidents have taken place within the last week or ten days in several Wisconsin papermills. While the fire company at the Kimberly-Clark Company's mill at Kimberly, Wis., was engaged in drill with fire hose, the men lost control of the hose due to the pressure of the water. It was thrown from their grasp and the nozzle struck Henry VanDomelen, 19. The youth suffered a compound depressed fracture of the skull, and is recovering in an Appleton, Wis., hospital. Alfred Hertzfeld, employed by the Neenah Paper Company, Neenah, was badly burned on the right hand and arm when they became caught in the hot drum of a dryer. Earl Miller, 27, of Appleton, Wis., employed by the Kimberly-Clark Company in Chicago, suffered severe injury to his eye when a pen knife broke and a piece of the steel blade struck him.



Showing the Sheahan Paper Carrier with an overhead return.

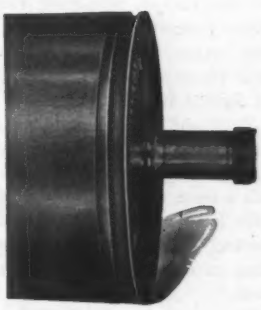


Illustration shows the special Black-Clawson flanged-rim bolted to the dryer. Notice that the flange touches the dryer only in a few spots, sufficient to line it up accurately with the dryer face. This construction provides an air space between the dryer and the flanged rim and keeps the rim cool so as not to injure the ropes.

The rim is made in two pieces so that it can be attached without lifting the dryer from its bearings. Complete installation can usually be made in one Sunday or at most two days.

It's Profitable at Slow as well as high speeds

It's a physical impossibility for a backtender to take wet paper, running several hundred feet a minute, and lead it through the dryers successfully. He's bound to lose a lot of production and have a huge pile of paper broke.

Even when the machine is running slowly there's going to be broke, while the slack is taking up.

With the Sheahan Paper Carrier, however, you save all this. This equipment takes the paper automatically from the press to the calender end of the dryer, and at the same speed at which the machine is running.

There's little or no broke and very much increased production. In fact, the savings usually pay for the installation in a very few months.

Sheahan Paper Carriers can be installed on both new and old equipment and on any type of paper machine.

You owe it to yourself and your stockholders to let us lay the complete data before you. There's no obligation, and it may be the means of helping you show increased profits.

THE BLACK-CLAWSON COMPANY

Hamilton, Ohio

Established 1873

Export Offices: 15 Park Row, New York City

Builders of Highest Quality Paper and Pulp Mill Machinery. Patentees and Sole Builders of Vertical Dryers.

BLACK-CLAWSON

SHEAHAN CARRIERS

Built with Machine-Tool Accuracy

Toronto Paper Market Continues "Spotty"

Dominion Day Celebrations Interfere With Regular Business Routine—Book and Writing Mills Remain Active, With Orders Booked for Some Time Ahead—Coated Paper Plants Keep Up Large Production —Rag and Paper Stock Conditions Fair

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., July 4, 1926.—The regular routine of business in the paper line was interrupted by Dominion Day, July 1, falling in the middle of the week, a national holiday which is generally observed. It was just 59 years ago that the scattered provinces of Canada were welded together into the Dominion, and a number of firms signalized the patriotic and historic event this year by issuing specially attractive and timely literature which was mailed to customers.

General business continues spotty and the office and sales staffs of the various wholesale houses have begun to take holidays. Some concerns are busy with their semi-annual inventory, which will occupy a few days. There are no price changes to record, with the exception of some slight reductions on one or two lines of Bristol board.

Book and writing mills are all busy and have orders ahead for some time. Coated paper plants keep up their large production owing to the issuing of a considerable number of catalogues at this season, as well as booklets and broadsides. The coated paper mills have sent out a broadside setting forth the merits of their product and the slogan of the plants is "Nothing can take the place of coated paper when used for the purpose for which it is made."

The rag and paper stock market continues fair but prices have fallen of late on manilas and news. Collections are not large, mills buying cautiously.

Several new lines of paper are being put on the market. The United Paper Mills, Toronto, are offering a prize of $25 for an acceptable name for a new line of paper they are just perfecting. It is a bond paper on one side and coated on the other, made-in-Canada. The paper comes in three colors and is especially recommended for the increasingly popular letter of four pages. Direct by mail advertising is growing wider all the time in Canada and both printers and jobbers are catering to customers along this line with special offerings in order to develop trade.

Tenders Called for Cutting Rights

The Department of Lands and Forests for Ontario is advertising for bids for the right to cut the jack pine, spruce and balsam timber in parts of the township of Malachi and Pelican, district of Kenora, having an area of over five square miles. Tenders will be received up to July 27.

Barrie Man Heads Weeklies

J. A. McLaren, proprietor of the "Examiner," Barrie, Ont., was elected president of the Canadian Weekly Newspapers Association, the annual convention of which was held in Quebec City recently. Another honor also came the way of the new president in that his paper, the "Barrie Examiner," was successful in winning the trophy for being the most enterprising weekly newspaper in Canada. The next place of meeting of the Association will be decided by the Board of Directors at their annual meeting, which is held in February of each year.

Equipping Several New Plants

William Hamilton, Ltd., Peterboro, Ont., manufacturers of saw and pulp mill machinery and hydraulic power plant equipment, report that while business in the sawmill machinery line is rather quiet at the present time, they have closed some nice contracts in pulp mill equipment and water turbines.

At Sault Ste. Marie, Ont., the firm has entered into a contract for the first new grinder unit for the Spanish River Pulp and Paper Mills, consisting of five 27-inch type "S" Leffel turbines, developing 1200 h.p. under 16-foot head. As soon as the first unit is installed, another unit will be proceeded with, until eventually 12 units in all, comprising some 60 wheels, are installed. These wheels are the latest type as made by John Leffel & Co., Springfield, Ohio, of which William Hamilton, Ltd., are Canadian manufacturers. William Hamilton, Ltd., are also manufacturing two 4-strand haul-up and two 3-saw slashers for the new pulp mill for the Canadian International Paper Company at Gatineau, Que., as well as considerable new equipment for the new mill of the Port Alfred Pulp & Paper Co.

Notes and Jottings of the Industry

J. Moore, of the city sales staff of the United Paper Mills, Toronto, and wife, are spending their holidays in Montreal and other points east.

Fred M. Halls, of London, manager of the London branch of the firm of the Fred W. Halls Paper Company, Toronto, is spending a holiday at Pleasant Point, Sturgeon Lake, Ont.

A provincial charter has been granted to Alex Ross & Son, Ltd., Mattawa, Ont., to buy, sell and deal in all kinds of forest products including pulp wood, with an authorized capital of forty thousand dollars.

Stanley S. Barnes, of the sales staff of the Fred W. Halls Paper Company, Toronto, was married last week to Miss Maye Fisher, of Collingwood. The happy couple spent their honeymoon on a motor tour to Ottawa, Montreal and Quebec City, and have now taken up their residence in Toronto.

A joint meeting of the Ontario and Quebec sections of the Canadian Paper Trade Association will be held in Montreal on July 20, at which a number of matters of mutual interest will be discussed.

The annual picnic of the F. N. Burt Company, Toronto, was held at Eldorado Park last week and was largely attended. W. G. Wilson, who is retiring as general manager, presented the prizes and was himself given a handsome club bag. Stuart Fleming, late of Owen Sound, is the new general manager and was cordially welcomed to his first picnic with the employees. The Fleming trophy was presented to the winning team of five pin bowlers in the winter tournament.

George E. Schneider, president of the Consolidated Water Powers and Paper Company, Wisconsin Rapids, Wis., spent a few days lately in Port Arthur inspecting the construction work being done on the site of the Thunder Bay Paper Company.

Fred W. Halls, wholesale paper dealer, Toronto, and family, are spending a holiday at their summer home on Sturgeon Lake, Ont.

C. Jackson Booth, of Ottawa, son of the late John R. Booth, widely known lumberman and paper manufacturer, who died last fall in his 99th year, was in Toronto last week conferring with the Ontario Succession Duties branch as to the winding up of the settlement of the succession duties on his father's estate, which estate amounts to about $8,000,000.

Pulp wood cutting is general throughout Ontario so far as peeling activities are concerned. The season is now at its highest and many settlers are taking out several cords in the north.

Fort William Paper Company, Ltd., Fort William, Ont., was recently granted supplementary letters patent authorizing the converting of 100,000 shares of common stock of the company of a par value of $100 into 100,000 shares of common stock without nominal or par value.

Your Paper is Made in Your Beaters!

This summer when you are on a motor trip why not drive through northern New York? Visit this beautiful country and call on us. We shall be very glad to see you and to show you the Dilts approved NEW TYPE beating engines being built in our shops.

Stay to lunch with us. We shall be delighted to entertain you and your traveling companions on beautiful and historic Pathfinder Island.

But come and see the NEW TYPE beating engines anyhow. You will be interested in them because "Your paper is made in your beaters."

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

Survival of the Fittest

Charles R. Berry

It is pretty generally conceded that nature, left to her own peculiar devices and given her fulness of time, operates unerringly toward the goal of perfection. This axiom may be particularly applied to reforestation—that most vital subject concerning our continuing use of forest products.

As commendable as scientific reforestation may be it is important that, in the pursuit of making trees grow by re-seeding, re-planting and transplanting, certain elemental characteristics of tree life be not entirely lost sight of.

While reforestation has been practiced in a limited way for many years, so-called scientific reforestation is as yet, an experiment; and this much may be said of the new art; as yet there has appeared not a thing to place the stamp of failure on the effort, and if it is the writer's prediction that scientific reforestation practiced in disregard of natural *impedimentia* will not achieve the success hoped for it by its enthusiastic proponents, it does not follow that some kind of reforestation will not realize a signal success.

A Practical Viewpoint

Professor B. L. Grondal, of the College of Forestry, University of Washington has a most practical viewpoint on the subject of re-growth. It is refreshing to quote from an address given by him recently and even though by virtue of the occasion his references were localized, the trenchant facts uttered by him are of general application. Professor Grondal said in part: "Nature has provided abundant means for reforestation and that nowhere in America is a better locality for this than in the cool, green depths of the Douglas fir region. . .growth in new forests on cut-over land alone, represents 3,000,000,000 feet annually. Stored in the moist surface soil are seeds without number, waiting for mature timber to be cut before the seedlings may wax great under the sunlight. Fire is the only enemy and the hazard is being lessened every year by intelligent methods of protection."

Here in a few well-considered words Professor Grondal has expressed what the writer has been "driving at" for years. Nature can and will take entire charge of the whole problem if man will but guard it from its enemies—chiefly fire.

Deciduous Growth First Appeared

From long observation, it is pretty well established in the opinion of the writer that a deciduous growth first occurred in all primal forested areas, followed by the conifers. Silica, or "sand," simply pulvarized rock, in itself contains no sustenance for vegetable growth; but as time, rain, sunshine, and frost in some localities, impregnated the sand with nitrates in most instances and limestone formations oxidized in others, this giving the ground a humus, in the course of events it became "soil". Evolutionists have not as yet upset the Biblical account of the origin of the vegetable kingdom, so we must conclude, as Jehovah did, that "it was good," and we need not go back of this conclusion but accept it as a fact that tree growth came by reason of its Creator willing it so.

The chief reason why it is a natural order for the leafy "annual" to appear first is because of its greater ability to attract and absorb nitrates from the air. The leaves of the tree, as in all vegetation are its respiratory system—its lungs; the greater the area of its leaves, the more rapid its growth. Its decay, however, is consequently as rapid and the powers of resistance of deciduous growth cannot be compared with that of the coniferous growth.

In the order of things, here was the start of the "seed bed" for the more massive and important tree growth of mostly conifers although the deciduous hardwoods might be said to be an outstanding exception. As an example of this order, glance up some steep mountainside that is forested with cone-bearing trees, note where an occasional rock slide has swept away the tree growth and if not too recent you will find that the new growth springing up almost in the wake of the slide as if by magic is deciduous—willow, aspen, alders, or any of a dozen of these leafy soil makers. Nature simply had to start all over again and it is very evident seed was lying in the earth, from ages agone, ready to start anew the original order upon demand.

Nature Has Settled Program

That nature has a settled program for the successful propagation of tree growth is beyond question. And while it is not possible perhaps, for man to adhere to nature's program, because of the time factor, it is courting failure to substitute in the place of all of the natural vagaries of regrowth the stilted regularities that obtain by scientific re-growing of forests.

The first departure from the natural order as practiced by the new art is that of replanting on cut-over lands that have been fire-run; this is a most common fault. There, the natural "bed" has been eradicated, and, if left to itself, would in all likelihood, grow up to deciduous shrubs. Following the lines of least resistance is the curse of scientific reforesting, for it is not an easy task to plant seed or transplant seedlings among the mazes of undergrowth and down stuff that usually follows the logging operation; indeed it is not only discouraging, but oftentimes fatal to the new seed or plant which succumbs to the better established growth.

Nature Alone Can Work Out Plan

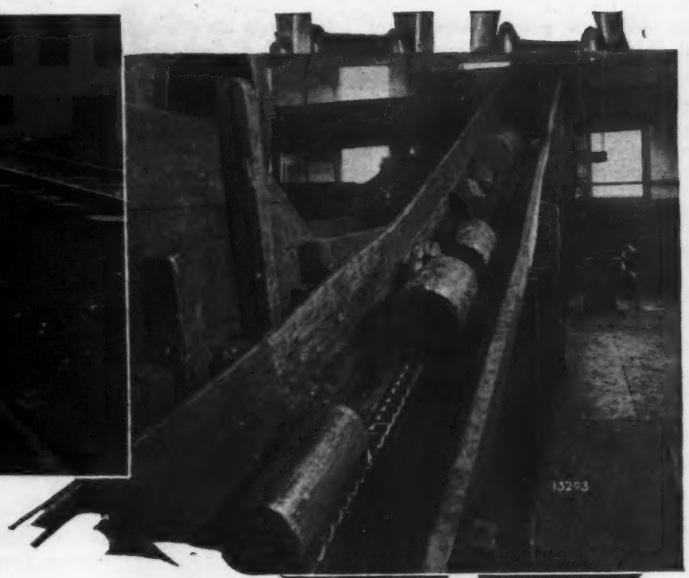
It is folly to attempt scientific reforestation on fire-run areas. Nature alone can work out a successful plan and as stated, time is the prime factor in a case such as this. Often nature has abandoned a locality as of a too difficult character to warrant the effort; to some such abandonment might we ascribe many of our prairies. In the writer's own time the "plains" of Northern Michigan have evolved. In the early eighties, pines and hardwoods were the pride of the Wolverine state; now, even the experiment of raising goats on these cut-over areas has proved a failure. Scientific reforestation, probably first tried on Michigan's logged off areas has not amounted to anything and never will; until nature in its slow way, has started again from the beginning—and the check mate of that program, fire, periodically sets the act of reconstruction back in the uncertain future.

Nature Can Be Depended Upon

Nature can be depended upon to assert itself upon the selective principle. The key to this is precipitation—rain, and vapors and snow—particularly rain and vapors. The greater the precipitation, the heavier the forest growth; the more frequent the precipitation on logged-off areas, the more ideal is nature's scheme of reforestation.

It is not at all wise economy for the forester of a paper mill to attempt reforestation of a piece of land simply because it belongs to his company and they are paying taxes upon it. Moisture conditions should have first place. If there are persistent drouth periods year after year, such a district should be placed under observance for a few years and note the character of vegetable growth that first appears. If sporadic, with the top soil disappearing rather than accumulating, that district would never pay to reforest by hand.

For the reasons stated in the beginning of this article, it is folly to plant for conifers (evergreens) when nature is showing by every manner of effort that conifers are not in order. There might be some small degree of success achieved by planting



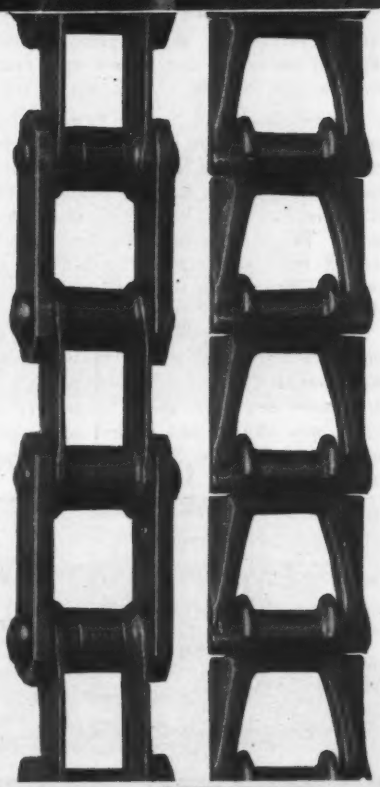
Hercules Chain Conveyor (Above)
Detachable Chain Conveyor (Right)

Hard Service

Proves The Dependability of Jeffrey Chains

THE steady grind of conveying raw material from stream to storage, or direct to barking machines; stacking and reclaiming pulpwood from storage; and keeping materials moving inside the mill from one operation to another demands equipment which can be absolutely depended upon to give uninterrupted service—and at low cost.

Just how well Jeffrey Chains stand up to the acid test is demonstrated by the fact that for a half century they have been selected by the leading pulp and paper mills, saw mills, etc.
There's a Jeffrey Chain for every Elevating, Conveying, and Power Transmission requirement—Let Jeffrey Engineers cooperate with you in selecting the proper type.



The Jeffrey Manufacturing Company

931-99 North Fourth St., Columbus, Ohio

New York	Pittsburgh	Cleveland	Milwaukee	Los Angeles
Buffalo	Scranton, Pa.	Charleston, W. Va.	St. Louis	Birmingham
Rochester, N. Y.	Boston	Chicago	Denver	Charlotte, N. C.
Philadelphia	Cincinnati	Detroit	Salt Lake City	Montreal

JEFFREY
MATERIAL HANDLING EQUIPMENT

Jeffrey Products
Elevators, Conveyors
Portable Loaders
Coal and Ashes Handling Equipment
Skip Hoists
Chains and Attachments
Sprocket Wheels—Gears
Crushers—Pulverizers
Sand and Gravel Handling, Screening and Washing Equipment
Locomotives
Coal Mine Equipment
Ventilation Fans

some deciduous growth suitable for pulp wood, but even at that, it would be more discreet to first let nature demonstrate the order.

The moisture belts of this and other countries will be the forest producers of the future, by the principle of natural selection, and with particular reference to the pulp and paper industry, the "wet" sections produce a better quality of pulp timber, for the more rapid the tree's growth, the softer is its fiber and more amenable to treatment for use as paper.

Nature not only uses a selective principle, but it also employs in its scheme of regrowth the principle of survival of the fittest. Here man, with all his boasted science, is unable to cope with the situation—that is, knowing what seedling to allow to continue growing and what one to cull out. It is all too evident the root system coupled with the root bed has more to do with nature's determinations than the appearance of the seedling above the ground. And it is not accident that causes one spruce to attain massive proportions with, apparently a rock for a root bed, when another seedling dies out in lush soil, which nine out of ten foresters would not hesitate to say was an ideal condition for growth. Nature has an order, then employs the selective principles followed by elimination of the weaklings.

Cannot Beat Nature

Man cannot best nature at this game; he can, however, aid nature to such an extent that nature may proceed unmolested by its enemies.

About a year ago in the PAPER TRADE JOURNAL, the writer advocated a zoning plan of pulp wood utilization; that is, the manufacture of the various grades of paper adjacent to where the timber used for such grades or groups of grades was most abundant. This plan would operate ideally with that of natural reforestation. Take news print for instance; one of the cheaper grades, calling for immense stands of hemlock and spruce. On account of the sharp rise in the curve of demand for news print the great menace is for the future generations, when the stands of pulp timber now in sight will be used up. Fortunately for the coming generation, the regions now supplying most of the news print material are those where nature's selective principles of moisture conditions are of their very best and if this regional plan was adopted and natural reforestation allowed to pursue an unimpeded course, the future generations would never face a shortage of forest products—of timber for lumber as for paper pulp.

Combination of Control Needed

A combination of federal and corporate control of this situation in all likelihood would be necessary to work out in its most practical manner such a project, for National Forest lands of the United States contain the bulk of the available pulp timber. Federal control alone is not suitable to deal with this problem, entailing as it does, a full demand upon the experience and enterprise of one of the chief industries of the nation, where trained minds are most vital to business success.

This article is not a condemnation of scientific regrowing of forest products, since that is yet in an experimental stage; but it may be considered as holding a brief for natural reforestation, which has been going on successfully since the beginning of creation and consequently should be duly considered before an experiment that, if it fails, will entail an incalculable loss—of time as well as material things.

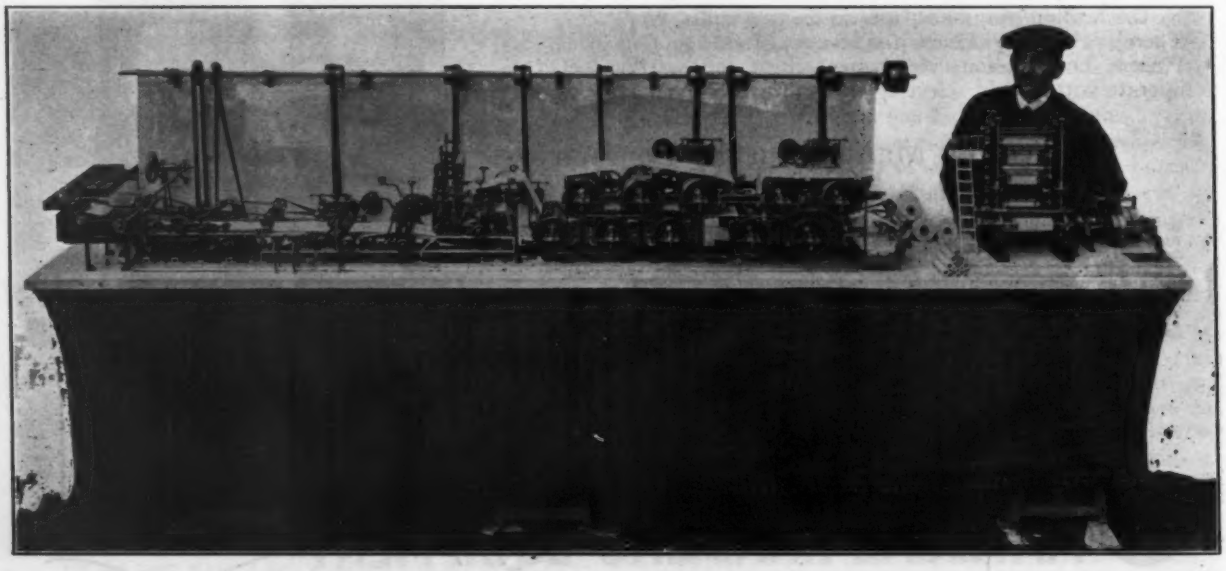
Island Paper Mill May Be Operated Again

[FROM OUR REGULAR CORRESPONDENT]

BALLSTON SPA, N. Y., July 6, 1926.—The Island Paper Mill property, one of the oldest paper manufacturing plants on Kaydeross Creek, may again be used for the manufacture of paper, according to reports here. It is understood that the present owners are negotiating with a paper mill firm with a large plant in Maine for the sale of the property which includes, besides mill buildings, valuable water power rights on Kaydeross Creek.

The present owners of the property, James McNamee and John F. O'Brien, purchased the mill and water power rights last fall from the Consolidated Paper Company, of Monroe, Mich., which had owned it for several years. The sale included building and water power rights only, the paper making machinery having been removed by the Consolidated Paper Company. At the time of the sale it was reported that plans were under way for converting the property into a hydro-electric plant which would furnish power to a number of industrial concerns here. These plans are now understood to have been abandoned.

The Island paper mill was at one time one of the busiest paper making plants in this vicinity where many paper mills are located. About 25 years ago it was owned by the International Paper Company and operated for a time as one of the I. P. chain of mills.



MINIATURE PAPER MACHINE MADE IN FRANCE

The Machine makes a sheet of paper 4 inches in width, and the total length of the Paper Machine is 2 feet high by 2 feet wide by 9½ feet long. This machine was begun in 1902 and finished in 1914, taking twelve years to build, and received a silver medal at the Lyons International Exposition.

Trust Your PRODUCTION to the BELOIT!

Proud of Their "Beloit"

"We are running steadily—due, most of all, to the running quality of the splendid machine furnished by you. We are proud of our 'Beloit' machine."

The NEW BELOIT Adjustable, Removable and Shakeable Fourdrinier has created some startling records in paper mill production within the past four years. Increases in output average from 15 to 50%.

The records thus established point to the wisdom of operation with modern equipment. The NEW BELOIT is a modern evolution, a mechanical necessity in every plant where profitable production is desired with a minimum of man power.

Let us send you facts.

The NEW BELOIT FOURDRINIER

BELOIT IRON WORKS — Beloit, Wisconsin, U. S. A.

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Knoxville, Tenn.—The Knoxville Paper Box Company, 200 East Magnolia street, has completed plans and will proceed with the immediate erection of a new one-story addition to its plant, estimated to cost in excess of $22,000, with machinery. A general building contract has been let to the A. R. McMurry Construction Company, Griffin and Island Home Avenues, Knoxville. R. F. Graf & Son, Journal Building, are architects.

Newark, Del.—The local mill of Curtis and Brother Company has been acquired by Herbert W. Mason, vice-president of the Dill and Collins Company, Philadelphia, Pa., and formerly treasurer of the S. D. Warren Company, Cumberland Mills, Me. The Curtis mill has a capacity of about 12 tons of book and writing papers per day, and it is understood that the new owner plans to organize a company to continue operations at the plant. Plans are said to be under consideration for extensions and betterments for greater efficiency in operation.

Shelbyville, Ind.—The Kennedy Car Liner and Bag Company, Shelbyville, manufacturer of paper products, has acquired the plant and real estate of the D. L. Conrey Furniture Company, on local site, at a receiver's sale for a consideration of $17,450. The new owner will take immediate possession, and plans to remodel and improve the factory for a new branch mill. Considerable additional equipment will be installed. The present mill will be continued as heretofore.

Morris, Ill.—Bids will be asked at once by the Morris Paper Mill Company for its proposed new one-story and basement addition on Washington street, designed largely for storage and distributing service. It is estimated to cost about $50,000. Mechanical handling and elevating equipment will be installed. C. A. Chapman, 9 South Clinton street, Chicago, Ill., is architect and engineer. William Beckwith is vice-president and general manager.

Sandusky, Ohio—The Hinde and Dauch Company, manufacturer of corrugated paper products, boxes, containers, etc., has authorized plans for a new four-story building on site near the Post Office, secured a number of months ago. The new structure will be used for office and general operating service, and is estimated to cost close to $200,000. Sidney Frohman is president.

Marion, Ind.—The Economy Box and Pie Plate Company, manufacture of paper boxes and containers, dishes, cups, etc., has plans under way for a new addition to its plant to provide for considerable increase in present capacity. It will be one-story, totaling about 10,000 sq. ft. of floor area. The equipment installation is estimated to cost close to $30,000, exclusive of building investment. W. H. Arthur is general manager; he will soon leave for a trip to Germany and it is currently reported will place orders for machinery in that country unless selections are made of American equipment before departure.

New York, N. Y.—Fire, June 29, damaged a portion of the stock of L. Teich & Sons, 500 Grand street, dealers in paper bags, etc. An official estimate of loss has not been announced. The damage will be replaced.

Kansas City, Mo.—The Midwest Wall Paper Company has work under way on its proposed new three-story plant at 1012 Locust street, estimated to cost close to $100,000, and it is said that the structure will be ready for occupancy in the near future. James E. Taylor, Reliance Building, is the general contractor. H. Alexander Drake, address last noted, is architect.

Brooklyn, N. Y.—The Standard Paper Company has leased space in the Bush Terminal, South Brooklyn, for general storage and distributing service.

Easton, Pa.—The Dixie Drinking Cup Company has preliminary plans under way for a new addition to its paper container manufacturing plant, to be located on the William Penn Highway The extension will be L-shape, 100 x 200 ft., to provide in all about 50,000 sq. ft. additional floor space, all of which will be given over to manufacture. A list of machinery to be installed will soon be arranged.

Fort William, Ont.—The Fort William Paper Company is perfecting plans for its proposed new sulphite pulp mill, to be equipped for a capacity of about 75 tons per day, and is said to be arranging to begin work at an early date. The expansion is estimated to cost close to $1,500,000.

Fort Frances, Ont.—The Fort Frances Pulp and Paper Company has preliminary plans under way for a new hydroelectric power project for service at a local news print mill with capacity of about 150 tons per day. The power development calls for three individual hydroelectric stations in this district, with gross capacity of from 25,000 to 30,000 hp. Plans for the news print mill are expected to mature at an early date. The entire project is reported to cost in excess of $2,000,000.

Ste. Anne De Baupre, Que.—The Ste. Anne Power and Paper Company, Ltd., Murray Bay, Charlevoix, has awarded a general contract to W. I. Bishop, Ltd., 10 Cathcart street, Montreal, Que., for its proposed new paper mill and power house. The project is reported to cost more than $2,500,000, with machinery, a list of which will soon be arranged. J. T. Donohue is president.

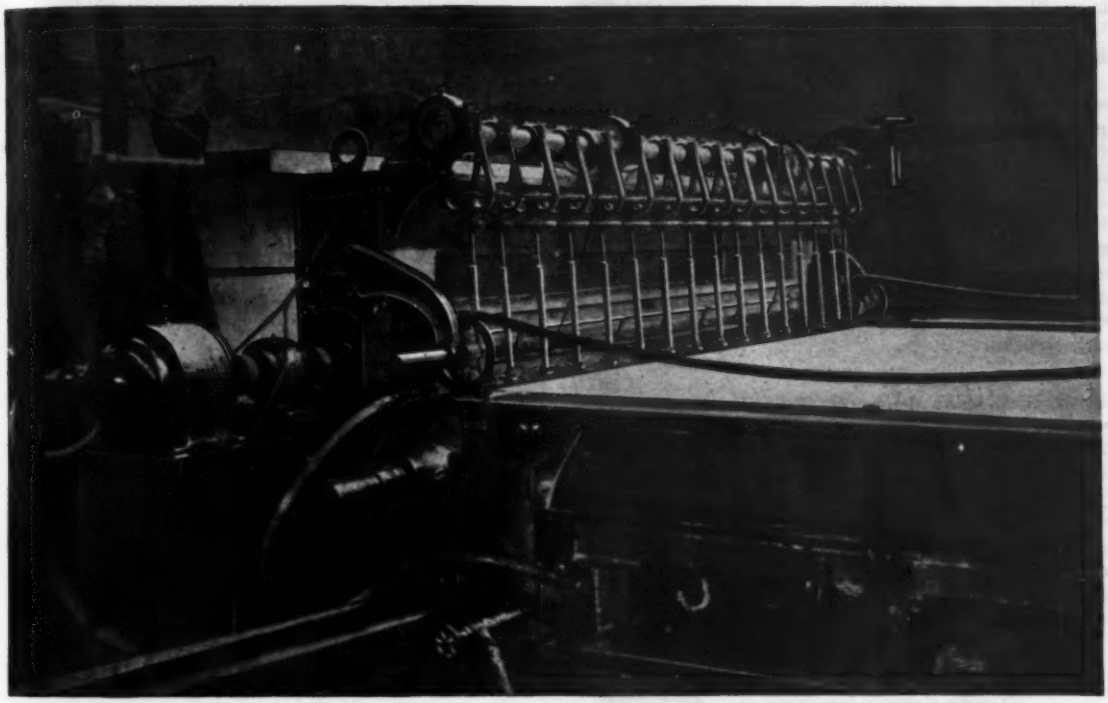
New Companies

Minneapolis, Minn.—The Kreampak Carton Company has been incorporated under Delaware laws, with capital of $2,000,000, to manufacture paper boxes, cartons, etc. It is said that a local mill will be operated. The temporary address of the company is care of Arley B. Magee, Dover, Del., attorney.

New York, N. Y.—Walter H. Howell, Inc., has been incorporated with a capital of 250 shares of stock, no par value, to manufacture paper boxes and containers. The incorporators are H. B. Nash, R. L. Schaefer and R. Kelly. The company is represented by H. O. Patterson, 215 Montague street, Brooklyn, attorney.

Sturgis, Mich.—The Harvey Paper Products Company has been incorporated with a capital of $250,000, to manufacture paper goods. A local mill will be operated. The incorporators are James G. Van Horn, Alfred F. Morency and Theodore T. Jacobs, all of Sturgis.

Cleveland, Ohio—The Miles Wall Paper Company has been incorporated with a capital of 500 shares of stock, no par value, to manufacture and deal in wall papers and other paper products.



13 Voith Inlets Used in Mills of Well Known Manufacturer

Thirteen Voith Stock Inlets are a valuable part of the paper making equipment used by one of the largest and foremost paper manufacturers in the world. The name of this company has stood for papers of quality and its product has improved steadily as the years went by. Each new development in the manufacture of paper is carefully investigated by this organization and that is why they were one of the first users of the Inlet.

They realized that the Voith Inlet meant a further safeguard of quality and uniformity. This practical paper machine appliance betters formation, helps to eliminate lumps and foam spots, makes a sheet of uniform caliper and makes possible an actual saving in production costs. We will be glad to give you complete information on request.

Have You a Copy of the New Inlet Booklet?

A copy of the new 20-page Voith Inlet Booklet will be mailed on request. Write for it today. This booklet describes in detail the Voith Inlet and shows how it makes better paper at a lower cost. Jobbers and printers are demanding papers with better printing qualities. This booklet tells how you can give it to them. Do not fail to get your copy. A letter will bring it to you immediately.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue

The incorporators are H. L. Smith, A. B. Miles and H. G. Holland, all of Cleveland.

Chicago, Ill.—The A and A Paper Box Company, 231 West Grand avenue, has been incorporated with a capital of $10,000, to manufacture paper boxes and containers. The incorporators are Harry Ginsburg, Sidney C. Nierman and William Kletke. The company is represented by Jacobson, Merrick & Latter, 111 West Washington street, Chicago, attorneys.

Fort Worth, Tex.—The Western Box Company has been incorporated with capital of $15,000, to manufacture paper boxes and other containers. The principal incorporator is George Kimble, City Hall, Fort Worth.

New York, N. Y.—The Traub Manufacturing Company has been incorporated with a capital of $10,000, to manufacture paper boxes and other containers. The incorporators are L. Levine and L. Bassiano. The company is represented by E. N. Zolla, 165 Broadway, New York.

Financial

Herkimer, N. Y.—The Waterproof Paper Products Company has filed notice of dissolution under state laws.

Indianapolis, Ind.—The Diem and Wing Paper Company, an Ohio corporation, has filed notice of organization, with capital of $3,600, to operate in Indiana, dealing in paper bags, roofing papers and kindred products. C. R. Hutchinson, 311 South Second street, Evansville, Ind., is representative.

New York, N. Y.—The Made Right Paper Box Company, Inc., 50 Wooster street, has filed schedules in bankruptcy, showing liabilities of $18,489, and assets of $1,142.

Contention of Importers on Paper Upheld

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 7, 1926.—The U. S. Trading Corporation of Milwaukee has obtained a ruling from the U. S. Customs Court on the correct tariff classification of certain imported paper. This paper, on entry, through the customs, was taxed as writing paper at 3 cents per pound and 15 per cent ad valorem under paragraph 1307, act of 1922. Claim was made for classification as printing paper, with duty at but ¼ cent per pound under paragraph 1301 of the tariff law. In upholding this contention, Judge Fischer writes:

"We are satisfied that this claim is well founded. The uncontradicted testimony of four witnesses who appear herein on behalf of the importers conclusively shows that the paper in question is a printing paper and is so exclusively used; that is was definitely, uniformly and generally bought and sold throughout the trade and commerce of this country on and prior to September 22, 1922, as a printing paper and never as a writing paper; that it is what is termed an 'off-set' paper, having a rough or comparatively rough surface required by such paper for use in printing on an off-set press; that, as stated by one of the witnesses, 'off-set' paper is used almost entirely for color printing and used in small booklets, large broadsides, folders and flyers, and which we term it through the mill, enclosures and calendar business, but that it is chiefly used as book paper." The Government offered no proof whatever in support of the collector's classification of this paper as a writing paper.

"On the record we sustain the claim of the importers and overrule the decision of the collector in each instance as to the paper involved herein."

Tuttle Press Salesmen Meet

Sales problems and possibilities for the coming year were discussed at a 3-day conference of salesmen of the Tuttle Press Company at Appleton, Wis. All were called in from their territory for a series of meetings in accordance with an annual custom and a dinner was given for them at Conway hotel. Seven of the company's representatives in foreign countries were present. The company's annual picnic was held at Brighton beach with 400 attending, and the salesmen were guests there also.

Trade Marks Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., Trade-Mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

LEFAX No. 201,002. Lefax, Philadelphia, Pa. For loose-leaf binders, filing and mailing envelopes, blank sheets, filing boxes, guide cards, indexes, paper punches, tracing cloth, rubber stamps, picture mounts.

C & C No. 210,164. The Cooke & Cobb Company, Brooklyn, N. Y. For paper and stationery, namely, wallets of paper and of paper and fabric; desk pad calendars, arch files; metal clips; binders, covers; folders.

STRAIGHT LINE No. 210,609. Fort Howard Paper Company, Green Bay, Wis. For toilet paper, paper napkins, doilies, and crepe paper.

BEN MONT No. 230,009. This mark appears on a wide yellow band having parallel thereto on each side a narrow yellow band. For wax paper, Christmas wrapping paper, and shelf paper.

VISBLEX No. 230,738. Henry Conolly Company, Rochester, N. Y. for looseleaf binders and leaves thereto.

GOLD DRAGON No. 231,134. The American Paper Manufacturing Company, Inc., New Orleans, La. For toilet paper.

BEN MONT No. 230,006. This mark appears on a wide green band having parallel thereto on each side a narrow green band. Bennington Wax Paper Company, Bennington, Vt. For wax paper, Christmas wrapping paper and shelf paper.

BEN MONT No. 230,007. This mark appears on a wide brown band having parallel thereto on each side a narrow brown band. Bennington Wax Paper Company, Bennington, Vt. For wax paper, Christmas wrapping paper and shelf paper.

BEN MONT No. 230,008. This mark appears on a wide red band having parallel thereto on each side, a narrow red band. Bennington Wax Paper Company, Bennington, Vt. For same as above.

DAYBREAK No. 229,812. The New York-New England Company, Holyoke, Mass. For writing and printing papers and ledger, record, vellum, envelope, text, book, coated, and cover papers.

ROYAL No. 230,959. S. E. & M. Vernon Inc., New York City. For bank books comprising account books, memorandum books, composition books, notebooks, etc.

CHAMPION No. 218,737. Commonwealth Publishing Company, Chicago, Ill. For blank books.

PICTURE OF BENJAMIN FRANKLIN AND A PRINTING PRESS—No. 222,700. Snowdon Parlette, Oklahoma City, Okla. For notebook fillers, note paper, writing tablets, pens, and pencils.

NONOTUCK BOND No. 211,254. Carew Manufacturing Company, South Hadley Falls, Mass. For writing and printing paper.

Another Paper Mill for Havana, Cuba

HAVANA, Cuba, June 23, 1926.—"It is reported on good authority," says the *Evening News* "that a group of local financiers is now forming a company for the purpose of building another paper factory in the vicinity of Havana." This will be the second factory of this kind, and it is announced that the new factory will extend its output to the manufacture of better grades of paper, including newsprint, writing papers and cardboard. It is planned to utilize raw material that can be produced or gathered in Cuba, thus opening another market for a product that has so far been allowed to go to waste.

"A company is also being projected to produce a quality of lumber for certain purposes that will utilize the bagasse from the sugar mills as the basic article, and which is claimed to fill a demand for certain kinds of lumber, including vegetable and fruit crate materials."

BLEACHED and UNBLEACHED
SULPHITES
KRAFT PULPS
GROUND WOOD
NORRONA
PULP STONES

PERKINS-GOODWIN CO.
33 WEST 42nd STREET
NEW YORK

PAPER
PRINTING PAPER
of
EVERY DESCRIPTION

Obituary

Norman B. Sprague

GLENNS FALLS, N. Y., July 6, 1926.—Norman B. Sprague, one of the pioneer paper mill men of Northern New York and for more than half a century connected with the International Paper Company, and its predecessors, died at his residence in Mt. Vernon, N. Y., early this week according to word received here. Mr. Sprague was born in this city on June 26, 1851. In 1874, at the age of 23, he accepted a position as clerk at the old Bradley & Underwood mill in Fort Edward and rose through the various departments of the business eventually becoming an executive of the firm. For a number of years he was assistant manager of the woodlands department of the International Paper Company.

The Fort Edward mill of Bradley & Underwood was purchased in 1892 by the Glenns Falls Lumber and Paper Company, Mr. Sprague continuing his connection with the business after the change. This firm was absorbed by the International Paper Company in 1898 and from then until his retirement a few years ago the deceased had been a valued employee of the I. P. Company. In 1911 he was made assistant general manager of the woodlands department. When he retired in 1922, owing to poor health and declining years, he was one of the oldest members of the I. P. Company's staff.

During his many years' connection with the lumber and paper industry Mr. Sprague had served as secretary and treasurer of the Morgan Lumber Company and the Fort Edward Lumber Company in which the late George F. Underwood was a large stockholder. The Morgan Lumber Company was absorbed by the International Paper Company in 1898. Mr. Sprague also became secretary and treasurer of the St. Maurice Lumber Company in 1893 two years after it had been organized and continued this official connection until the business was taken over by the I. P. Company in 1898. Up to the time Mr. Sprague became identified with the I. P. Company about five hundred million board feet of lumber had been cut by the organizations with which he had been closely identified. Mr. Sprague was also treasurer of the various subsidiary woodland operating companies of the International Paper Company.

The survivors are the widow, three sons and a daughter. The remains were brought to this city Thursday and the funeral was held from the home of a son.

Alexander Gillies

TORONTO, Ont., June 25, 1926.—Alex. Gillies, who passed away in Toronto on June 26 in his 83rd year, was one of the veteran papermen of Canada. Up till a few days ago he was at his desk in the office of the Rolland Paper Company, Toronto, and his illness was of short duration.

Mr. Gillies, who was born in Glasgow, Scotland, was a son of the late George and Catherine Buntin Gillies. When nine years of age he came to Canada with his parents who took up their abode in Hamilton. Mr. Gillies was early directed into paper manufacture and distribution of paper—an industry in which several of his relatives had already made their mark in Upper and Lower Canada.

After an education in Hamilton, the late Mr. Gillies went to Montreal where his uncle, Alexander Buntin, had mills as well as at Valleyfield, Que. After a thorough training there he returned to Hamilton and entered the firm of Buntin & Gillies. Several years afterwards he again went to Montreal and formed a partnership, first with Mr. Boyd and later with Mr. Patterson, under the name of Boyd, Gillies & Patterson, and Gillies & Patterson.

On the occasion of his 81st birthday, many friends of Mr. Gillies in Toronto and elsewhere evidenced their appreciation of his long association with the paper business by presenting him with an engraved address and a basket of daffodils. Numerous telegrams of congratulation were also received. Five children are left to mourn his death, two nephews and other relatives, most of whom reside in Hamilton where the remains were taken for interment in the family plot.

BUSINESS DECLINES IN CHICAGO

(*Continued from page 32*)

making and a knowledge of paper that they did not previously possess, and naturally increases their interest in paper by proving that all paper is not just paper, but that there are many special kinds for many special uses. The window display is enhanced by a bundle of clean rags on the floor, a wood bolt with the bark on; glass jars of cut rags, bleached rag stock, cooked rag stock and paper stock ready for the machines; and sheets of unbleached sulphite.

Hollis & Duncan Enjoy Record June

Hollis & Duncan, 732 W. Lake street, had the biggest June business in its history, reported H. B. Hollis. Paper bags, in which this large concern is increasing its manufacturing facilities, are making for the largest total volume of sales. Wrapping paper is just a little short of normal, though the probable advance in price will improve this situation, if it comes. Mr. Hollis believes the usual July dullness will be escaped this year, as his firm has enough orders on hand to operate its manufacturing department day and night for the next thirty or forty days.

Shrewd leaders of the coarse paper group are of the opinion that the recent rise in the price of Southern Kraft to .04¼ is unwarranted by actual demand conditions. One executive, noted for his keen foresight, stated: "I don't see any reason why the mills should get so rambunctious. The supply is bigger than the demand. We are not buying a dollar's worth, for the price may drop back to the old figure in thirty days or so."

Paper Board Merger Pleases

Members of the paper board industry are well pleased at the merger of the paper board department of the Chicago Mill and Lumber Company and the Philadelphia Paper Company into an $18,000,000 organization. They are hopeful that it will aid in stabilizing prices—which is badly needed in the Chicago territory. It is realized, however, that even with so large and influential an organization operating for price stability, it is hardly big enough to fully accomplish this purpose. It is quite probable, however, that other paper board concerns will join the merger just as soon as the necessary arrangements can be made.

There is plenty of paper board tonnage moving, but prices are still too low. It is felt that this situation will correct itself in the near future, probably within the next few weeks.

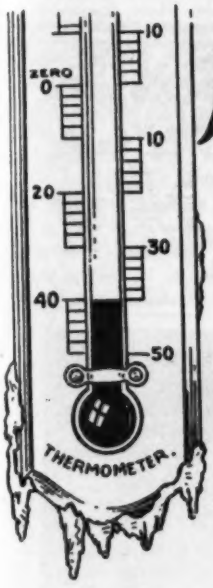
Graton & Knight Co. Awarded First Prize

[FROM OUR REGULAR CORRESPONDENT]

WORCESTER, Mass., July 6, 1926.—Worcester gained fame at the convention of the Associated Advertising Clubs of the World held in Philadelphia last week through the exhibit of Graton & Knight Manufacturing Co., of this city, in the industrial hall of the convention, which was awarded first prize in competition with exhibits of sales campaign material entered by hundreds of the leading manufacturing and business firms in the United States and 14 foreign countries.

Reported at the special luncheon meeting last week at the local club at Winchester's on the Lake, that the exhibit of Graton & Knight's attracted considerable attention among the 10,000 advertising men from all sections of the world who were gathered at this big affair.

The industrial exhibition hall, in which the exhibit of Graton & Knight Manufacturing Company was located, had 12,000 feet of advertising material entered as the finest specimens of sales campaigns by the foremost national advertisers of the United States, England, France and 12 other foreign countries.



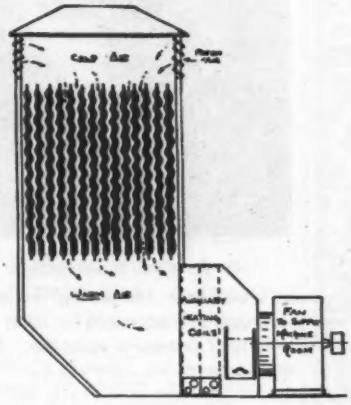
Most heat when you need heat most

One of the outstanding features in the consistent performance of the

Briner Economizer

LICENSED UNDER PATENTS OF E·A·BRINER AND JOHN E·ALEXANDER

The colder the air entering the Economizer—the greater the transmission of heat per square foot of surface.



Consider These Things NOW— rather Than 6 Months From Now

- - **that a Briner Economizer will heat your machine room air supply by utilizing waste heat from vapor.**

- - **what this will mean to your mill in saving steam; in reducing heavy loads on your boiler plant; in cutting conversion costs of paper — this coming winter.**

Write now—ask what the Briner Economizer can do in your mill. Our engineers will tell you what results you can expect.

J. O. ROSS ENGINEERING CORPORATION

549 W. Washington Blvd.
CHICAGO, ILL.

30 E. 42nd Street, NEW YORK
1117 Tacoma Avenue
TACOMA, WASH.

79 Milk Street
BOSTON

ROSS ENGINEERING OF CANADA, Limited

NEW BIRKS BLDG., MONTREAL, QUEBEC

ROSS SYSTEMS

HEATING - VENTILATING - DRYING

Important Wood Pulp Trade Consolidation

An interesting development in the wood pulp trade is the consolidation which went into effect July 1 of the firm of Nilsen, Lyon & Co., Inc., of New York, with Atterbury Bros., Inc.

Nilsen, Lyon & Co., Inc., was formed in 1913 to take over the importation of Scandinavian wood pulp on behalf of the firm of John Lyon & Co., of Gothenburg, Sweden, and Anth. B. Nilsen & Co., of Oslo, Norway, two of the oldest firms engaged in the pulp industry in Scandinavia.

The firm of John Lyon & Co., was originally founded in 1750, and has been continued up to the present time by the Lyon family. The firm of Anth. B. Nilsen & Co., was founded in 1879 by Consul Anth. B. Nilsen, who was one of the pioneers in the manufacture of sulphite pulp, and among the first to export it to America.

HOWARD E. ATTERBURY

Both of the above firms are among the best known in Scandinavia and are financially interested in many of the mills producing wood pulp in their respective countries. The American branch, under the management of Stanley C. Willey, has prospered extensively during the past few years, and it today one of the leading firms in the business.

Atterbury Bros., Inc., was founded in 1876 by Robert B. and Henry Atterbury, to deal in paper mill supplies and has been continuously active since that time, being well known throughout the trade. Upon the death of the senior members of the firm, Howard E. Atterbury succeeded to the Presidency of the Company and has continued in active management.

The purchase of the firm of Nilsen, Lyon & Co., was consummated a few days ago during the visit of G. M. Jenssen, of John Lyon & Co., and the election of Mr. Willey to the Vice-Presidensy of Atterbury Bros., Inc., indicates the growing tendency in the trade to concentrate in strong hands the supply of raw materials.

Atterbury Bros., Inc., have just removed to larger quarters at the Bowery Savings Bank Building, 110 East 42nd street, New York.

Paper Board Industries Association to Meet

The summer meeting of the Paper Board Industries Association will be held at the Roosevelt Hotel, New York City, Wednesday, July 21, and Thursday, July 22. On Wednesday, July 21, there will be a meeting of the Folding Box Group in the morning and of the Paperboard Group in the afternoon. The Container Group meeting will be held on Thursday morning; the General Meeting of the Groups in joint sessions convening at 2:00 P.M., Thursday afternoon. The schedule of meetings is as follows:

Meeting in "The Foyer," Mezzanine Floor, Roosevelt Hotel.

Wednesday, July 21, 1926; 9:45 A.M.-1 P.M.—Meeting of Folding Box Group, Vice-President A. C. Osborn presiding. 2:00 P.M.-5:30 P.M.—Meeting of Paper Board Group, Vice-President Walter P. Paepcke presiding.

Thursday, July 22, 1926: 9:30 A.M.-12:45 P.M.—Meeting of Container Group, Vice-President J. P. Brunt, presiding. 1:00 P.M.-2:00 P.M.—Luncheon—all members. 2:00 P.M.-5:30 P.M.—Meeting of the 3 Groups in Joint Session, President Fletcher M. Durbin presiding.

President Durbin has directed that call be sent out for a meeting of the Executive Committee, to be held at the Roosevelt Hotel, Tuesday afternoon, July 20. Calls are also being sent out for meetings of the Standing Committees, to be held on the morning of July 20th. These meetings will be presided over by the respective Chairmen; namely, Research, F. J. Kress, chairman; Sales Promotion, J. P. Brunt, chairman; Standardization, John L. Barchard, chairman; Statistical, E. R. Hankins, chairman; Trade Customs and Practices, H. C. Stevenson, chairman.

STANLEY C. WILLEY

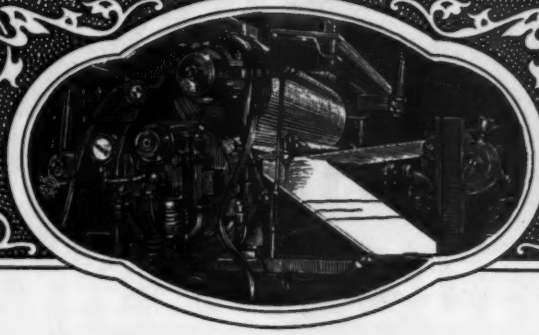
A meeting of the Container Group Advisory Board is also being called for the morning of Wednesday, July 21.

A special effort is being made to secure 100% representation of member companies at the meetings. At the May meeting Vice-President A. C. Osborn, of the Folding Box Group, appointed a Special Committee on Attendance, which has commenced to function. The personnel of the Committee is: Messrs. Edward G. Gereke, Gereke-Allen Carton Company, St. Louis, Mo.; H. H. Stonebarger, The Globe Folding Box Company, Cincinnati, Ohio; E. T. Gardner, The Gardner & Harvey Company, Middletown, Ohio; H. C. Campbell, Robert Gair Company, New York, N. Y.; H. C. Stevenson, The Rochester Folding Box Company, Rochester, N. Y.

Interesting programs are being prepared for the Group and General Sessions. Everything points to a well-attended, interesting and instructive meeting.

J. H. Butler Leaves Analomink Paper Co.

NORTH WATER GAP, Pa., July 6, 1926.—J. H. Butler, Superintendent of Analomink Paper Co., has resigned his position there and will go by auto to Spokane, Wash., with his wife and daughter for a rest of at least one year.



Felts that combine toughness with water removal

LOW maintenance demands a felt that is tough enough to withstand the wear of friction against suction boxes, the tons of pressure at the nip of the press rolls, and the constant pull of the load.

Economical production, however, demands a felt that is absorbent enough to remove water and continue to remove it over the longest period of time. To combine them, diametrically as they are—that is the test of a felt maker.

Because of the three generations of felt making experience behind Hamilton Felts, you secure in them the perfect combination of toughness that means long life and low maintenance, and water removal qualities that insure profit making production costs. But to paraphrase the old saw, "the proof of the felt is in the use thereof." You can easily prove the superiority of Hamilton Felts to your own satisfaction by trying them out. Try them once and you'll use them always.

Hamilton Felts are marked by two blue lines full width of the felt and by one shorter blue line midway between them.

Talk with a Hamilton Felt Man about your felt problems. His experience is at your disposal. There is a Hamilton felt for every need in paper production.

SHULER & BENNINGHOFEN Hamilton, Ohio

The Miami Woolen Mills **Founded 1858**

Hamilton Felts

New York Trade Jottings

G. A. Ware and G. D. Bierce, of the News Print Service Bureau, 342 Madison Avenue, New York, have returned to headquarters after a three weeks' business trip in Newfoundland.

* * *

O. F. Swanson, sales manager for J. Anderson & Co., of 21 East 40th street, New York, importers of pulp, has returned to town after a long and comprehensive tour of the Western States.

* * *

C. W. Morgan, assistant manager of the Crown Willamette Paper Company, of Portland, Ore., who has been inspecting the eastern paper mills, was in New York early this week.

* * *

The C. W. Rantoul Company, of 30 East 42nd street, New York, is now representing the Monroe Felt and Paper Company in New York City, as selling agents for their well-known parcel post kraft.

* * *

D. A. Crocker, secretary of the Salesmen's Association of the Paper Industry, was a delegate from his association to the National council of Travelling Salesmen's convention, held last week at the Hotel Pennsylvania, New York.

* * *

The International Paper Company has placed its common stock on a $2 annual basis, after an interlude of 27 years. The last dividend paid on the old $100 par common was $1 in 1899. Stockholders of record August 4, will receive a quarterly dividend of 50 cents on August 15.

* * *

D. A. Crocker, forester, of the Woodlands section of the American Paper and Pulp Association, with headquarters at 18 East 41st street, New York, is visiting the paper mills in the Philadelphia district and Spring Grove, Pa., this week. Mr. Crocker plans to visit the Albany and Glens Falls paper mills next week.

* * *

Dr. C. B. Thwing, president of the Thwing Instrument Company, sailed from New York recently aboard the Lloyd Sabaudo liner *Conte Biancamano*, for Naples. Dr. Thwing plans to tour Italy, Switzerland, Germany, Holland, Belgium, France, England and Scotland, during the next three months.

* * *

Bookings of the Westinghouse Electric and Manufacturing Company for the quarter ended June 30, 1926, are estimated at $44,600,000, comparing with $44,400,000 in the same period a year ago and with $52,596,000 for the three months ended March 31, 1926. For the second quarter of 1926 billings are placed at $45,100,000, against $38,200,000 last year, an increase of 18 per cent, and against $44,861,000 for the first quarter of the current year.

* * *

George F. Hardy, the well-known paper mill engineer and architect, of 309 Broadway, New York, had conferred on him at the annual commencement of Dartmouth College, the honorary degree of Doctor of Science. Mr. Hardy is an alumnus of Dartmouth in the class of 1888, and the Thayer School of Engineering. Mr. Hardy is among the leaders of his profession, and has built many of the most representative pulp and paper mills in this country and Canada during the past thirty odd years that he has been engaged in the work. Mr. Hardy's numerous friends, who are acquainted with his outstanding work in the industry, will feel that this honor conferred on him by Dartmouth is well deserved.

Testing Poplars for Pulpwood Qualities

ROCHESTER, N. Y., June 30, 1926.—Poplar trees in the city parks for the past few days have been displaying small paper bags tied here and there over the tip end of a branch, presenting an incongruous appearance which has been the subject of comment by passersby.

Inquiry at the Park Department reveals that the little bags are all part of an experiment that is being conducted by several Vermont lumber men in an effort to produce a poplar which will better serve the paper making industry as pulpwood. The Vermont men who have been on the job since the blossoms first appeared on the poplars are trying to make Mother Nature produce a hybrid poplar which will be more desirous and faster growing.

Blossoms on certain varieties of poplar were selected by the lumber men and artificially cross-fertilized with pollen from other poplar trees. Then the bags were tied over the blossoms to prevent the wind or the bees, nature's own cross-fertilization agents, from interfering with their artificial work. When the seeds are matured, which will be in a few days now, the bags will be removed and the seeds gathered, carefully labelled, and planted. It will be several years, however, before the seedlings are sufficiently large to show definitely what this interference has produced.

Cross-pollinization or hybridization, is a common practice, producing some of the finest and sturdiest examples of plant life. The hybrid so produced, however, does not reproduce, itself in kind, but has offspring which revert to either one of the original parents.

Address Michigan Paper Mill Engineers

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., June 28, 1926.—"Co-operation" was the subject of an address delivered Thursday evening in Kalamazoo by Andrew J. Callahan, president of the American Oil Company, Jackson. He was the speaker at a dinner session of Michigan paper mill engineers, held at the Park-American hotel. It was a well attended gathering, bringing to Kalamazoo paper mill workers from all over the state and in addition several engineers now in the employ of the Postum Cereal Company and Kellogg's Corn Flakes Company, Battle Creek. Edward C. Rutz, chief engineer at the Bryant Paper Company, presided. J. P. Callahan, Kalamazoo representative of the American Oil Company, also made a few remarks "The foundation of any organization or business is confidence" said President Callahan in his opening remarks. "It springs from integrity, fair dealing and mutual service. Confidence, gentlemen, is the life's blood of the nation—of your business and my business. If it were not for this confidence how far would we get?"

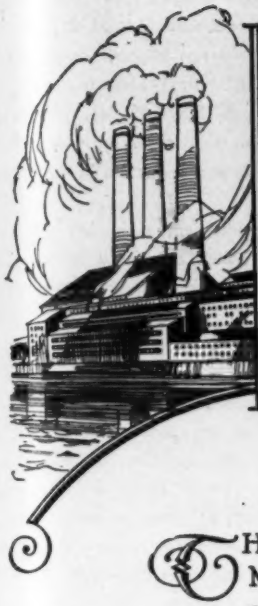
The speaker added that confidence builds co-operation, adding "that is my subject. Without co-operation nothing succeeds—everything fails. It is the very existence of every successful enterprise, be it ever so large or ever so small.

"As I said before you men have positions of trust. The company who employs you depends on you to keep the mechanical end of the business going. Their belief in you is confidence. Be you ever so skillful, if you do not have the co-operation of the company for which you work, also of your associates, how efficient could you be? You know the answer just as well as I do—you would be a failure."

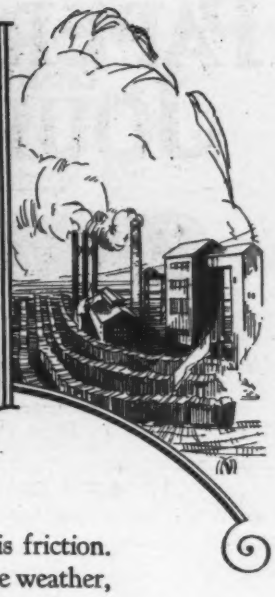
Annual Outing of Farrel Foundry & Machine Co.

ANSONIA, Conn., July 6, 1926.—The annual outing of the office Engineering Department and officials of the Farrel Foundry and Machine Company, was held at Double Beach, Conn., on Saturday, June 26. Lunch was served immediately on arrival at the shore resort, after which a baseball game between the married men and the single men was enjoyed. The baseball game was followed by other athletic events, which were much enjoyed.

After the athletic events ended a fine shore dinner was served, at the conclusion of which short addresses were made by various officials of the concern.



Why Machinery Wears Out



THE ONE great factor in the wearing out of machinery is friction. Machinery will rust, of course, if it is not protected from the weather, and it will corrode if exposed to acid fumes, but these are unusual conditions. Friction is the one agency that is continually at work while the machinery is running.

Friction is the cause of a large percentage of all repair and replacement costs. Reduce friction and there is an immediate reduction in these two items of your operating expense.

Reducing friction means choosing the right grade of oil for each piece of machinery. There is a right grade of oil for every bearing. This grade will permit the bearing to operate with the least possible wear and on the least possible power.

Standard Oils and Greases

are made in many grades to suit the lubrication requirements of every kind of machinery in use in the industrial world. The representative of the Standard Oil Company (Indiana) can tell you the correct grades to use on your equipment. Follow his recommendations and you will reduce your repair and replacement costs to the lowest possible figure.

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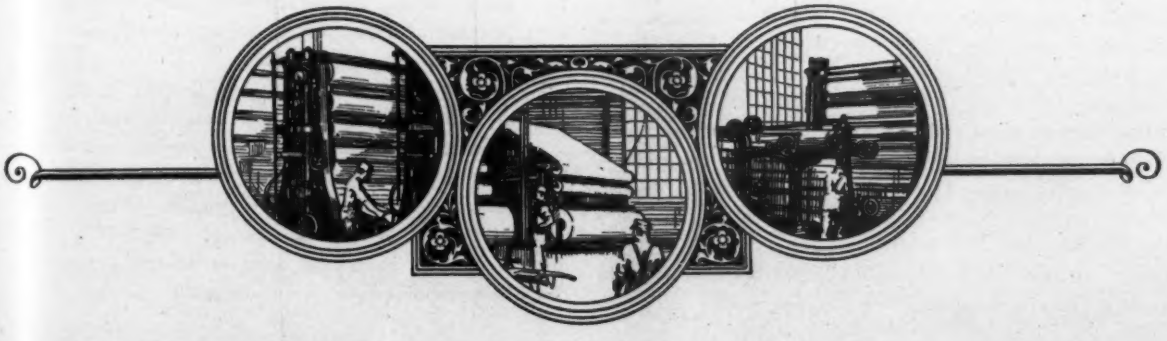

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The Magazine of the Paper Industry
HENRY J. BERGER Editor

Member A. B. C. Audit Bureau of Circulations

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FOREIGN TRADE IN PAPER

Exports of paper and board from the United States during May reached a total value of $2,201,274, and while this amount represents a slight increase in comparison with the corresponding month of last year, it is considerably under the value of April shipments, according to the Paper Division of the Department of Commerce.

Nearly all classes were affected by the downward trend during May. Exports of news print, which have fluctuated to a considerable extent during the past eight or nine months, again decreased, the May shipments falling 30 per cent under those of the preceding month, and 25 per cent under those for May, 1925. Substantially the same decrease in comparison with the preceding month occurred in exports of writing papers, which also show considerable variation from month to month. Compared with the corresponding month last year, however, May shipments in this line increased nearly 200 per cent. Exports of all other lines of fine paper and of paper specialities during May likewise fell under those of the preceding month, and in most instances below those of the corresponding month in 1925. Exports of wrapping papers held fairly steady, the aggregate shipments showing a loss of 5 per cent. in comparison with April and a like gain in comparison with the corresponding month last year. A notable exception to the general downward trend in the May shipments was offered by boards of all classes, including wall boards. Exports of bristol boards and boxboards were not only from three to four times the volume of the corresponding month in 1925, but were substantially above the high level of the preceding month, and while shipments of miscellaneous boards dropped slightly under the April shipments they were nearly 30 per cent higher than during May, 1925.

Exports of paper base stocks from the United States during May, which were valued at $415,665, show a loss of 13 per cent. in comparison with the same month in 1925 and a loss of 17 per cent. in comparison with the April shipments of this group. This reduction was due chiefly to the decline in shipments of sulphite pulp and rags. Exports of pulpwood, while showing some increase over the previous month were also considerably under the May, 1925, shipments.

Imports of paper and board into the United States during May were 20 per cent. under those of the preceding month, due principally to the drop in receipts of standard news print, which represents 88 per cent. of the total imports valued at $10,218,927. Of the remaining receipts, other printing papers, miscellaneous wrappings, surface coated papers and pulp boards increased both in comparison with April and with May of last year, while greaseproof, kraft wrapping, tissue and cigarette papers, miscellanous boards and paper boxs show a reduction in the volume of shipments.

Imports of paper base stocks underwent a further reduction during May, pulp wood receipts, which comprised 60,806 cords valued at $591,244, having fallen 30 per cent. under the April incoming shipments and 40 per cent. under those during May 1925, while imports of other paper base stocks amounting to 132,329 tons, valued at $7,830,458, show a decrease of 6 per cent. under receipts during the two months under discussion. The chief losses under the latter group occurred in imports of rags, which fell 50 per cent. below the April receipts and 13 per cent. under those for May the corresponding month last year. Other serious reductions occurred in imports of bleached chemical pulps and waste bagging, old rope and similar waste. Imports of unbleached sulphite and unbleached sulphate were from 10 to 20 per cent. above the April or May, 1925, receipts. Imports of mechanical ground wood recovered to a great extent from the slump in the April incoming shipments, but nevertheless failed to attain the level of receipts during the same month last year.

TO CORRECT TRADE ABUSES

As a first step in bringing to a common focus efforts of the various trades and industries to reduce the wastes in business resulting from trade abuses and misunderstandings and unethical trade practices the Committee on Trade Relations of the Chamber of Commerce of the United States held its first meeting in New York on June 29 to lay out a plan of its activities.

It was agreed that the work upon which it is embarking and which has for its purpose the eventual establishment of a complete system of business self-regulation should, at the present time, take four directions:

1.—Promotion of the development of joint trade relations committees within each trade and trade group, including representative manufacturers, wholesalers and retailers, for the adjustment of trade controversies and the establishment of standards of business practice.

2.—A Survey of the existing agencies for the regulation of trade practices to determine what progress already has been made in this direction.

3.—To serve as a medium of information for such trades or trade groups as have already set up the necessary machinery for the adjustment of disputes or the correction of unethical business practices.

4.—To cooperate with existing organizations in the development of arbitration as a method of adjusting trade disputes.

The Committee summarized its general conclusions in the following statement of its immediate purposes:

"Investigation has disclosed that misunderstandings, abuses and unethical practices between manufacturers, wholesalers and retail distributors result in loss and waste to industry and increase the cost of merchandise to the consuming public;

"A number of industries through their own trade associations have created Joint Trade Relations Committees which function in the direction of removing misunderstandings and unethical practices:

"We believe this method is best calculated to promote sound trade practices: Therefore the National Trade Relations Committee of the Chamber of Commerce of the United States will undertake actively to promote the organization of Joint Trade Relations Committees, consisting of representatives of associations of manufacturers anud wholesalers, or of such associations and associations of retailers concerned in the sale of similar commodities. It will be the function of the National Trade Relations Committee to assist in the organization of such joint committees with the hope ultimately of bringing about the organization of a committee representing all factors in production and distribution. These purposes should be accomplished through a survey of the field; by suggestion and advice as to method and procedure; by promoting conferences of representatives of the various groups so organized into joint committees; and by acting as a National Clearing House of information for all organizations now engaged —or which shall in the future be engaged in efforts to improve trade practices."

Members of the committee representing several trade groups described the striking progress already made in some of the industries toward the establishment of systems of self-regulation within the trades or certain branches of trades and agreed that the time is most propitious for rearing upon this foundation a more highly developed structure for the adjustment of disputes and the correction of unethical practices which are the source of waste in the distribution of merchandise.

A more detailed program of activity will be outlined at the next meeting of the Committee which is expected to be held in September. In the meantime a survey of the whole field will be made to determine the directions in which the most useful and quickest practical results may be accomplished.

Power License in Alaska Revoked.

PETERSBURG, Alaska, June 22, 1926.—The license granted by Huton, McNear & Dougherty, San Francisco brokerage firm, on the Thomas Bay power site near Petersburg, has been revoked by the Federal Power Commission, it was announced by Dist. Forester C. H. Flory. The site is now open for entry by anyone.

The Thomas Bay license was granted to the San Francisco firm in 1923, for the purpose of utilizing it in connection with the establishment of a pulp and paper manufacturing plant. Failure to carry out the development program required by the terms of the license and failure, also to make a financial showing for the purchase of timber and plant establishment are given as the reasons for revoking the license.

"The licenses were given every possible consideration," Mr. Flory said in commenting on the action of the Power Commission. "Several extensions of time were granted on the application of Mr. Dougherty, who had personal charge of the efforts to promote the project. The Forest Service gave its approval to these extensions. An application was made for a further extension but no satisfactory showing was made to support it, consequently it was denied and the license cancelled for noncompliance with its requirements."

The site is regarded as one of the most promising in Alaska. It is capable of being developed economically to produce 24,000 horsepower and is located in a fine unit of pulp timber.

Louisiana Paper Co. to Build New Unit

BASTROP, La., July 5, 1926.—Workmen have begun clearing ground and excavating for the new paper machine room of the Louisiana Pulp and Paper Company's plant. The new building will be of brick and concrete, 100 by 564 feet, and will house an additional paper machine, which is now being built. It will require about eight months to complete the installation of the unit.

The Louisiana Pulp and Paper Company was originally built to manufacture 180 tons of wood pulp and 120 tons of paper daily. The installation of the new paper machine will permit the use of the entire pulp output in the manufacture of paper.

The new unit represents an expenditure of approximately $1,000,000. This, coupled with a capital investment of $6,000,000, will bring the total of $7,000,000. While all plans had been drawn and the necessary arrangements made to go ahead, a formal meeting of the directors of the company was held recently in the offices of the mill here, which gave official sanction to the enlargment. Those present at the meeting were: Richard McCulloch, president; W. M. Bemis, vice president; R. J. Cullen, vice president and general manager; J. H. Grover, Lawrence A. Olwell, John F. Boyle and Duncan McRae.

Mr. Cullen first visioned Bastrop as a paper mill center, having first built the Bastrop Pulp and Paper company plant, now a part of the great chain of international paper mills. He afterwards helped to organize and build the Louisiana Pulp and Paper company. Bastrop is the largest kraft paper mill center in the south, and from present indications another mill is in prospect.

Watervliet Paper Co. Issues Bonds

KALAMAZOO, July 6, 1926.—First mortgage 6 per cent bonds of the Watervleit Paper Company to the amount of $500,000 were offered Wednesday by Olmsted & Mulhall, who had purchased the entire issue. The Kalamazoo National bank is trustee. The issue is dated June 15, 1926, and runs to June 15, 1941, being retired serially over a term of fifteen years. During the first five years any portion of the issue is callable at 102 at the option of the company. After that par price will prevail.

Funds derived from the sale of the bonds will be used for the installation of a 120 inch high speed Fourdrinier paper machine, product of the J. H. Horne & Sons Company, with auxiliary machinery and enlargement of the finishing and coating divisions. With the completion of the improvements outlined, the capacity of the mill will be doubled.

The last financial statement prepared by Ernst & Ernst shows current assets of $742,118.32; permanent assets including plant and machinery, $1,113,206.80; other assets, $54,935.73; total, $1,918,818.14. Against this are current liabilities of $86,631.03; reserves, $62,500, capital and surplus, $1,769,687.11.

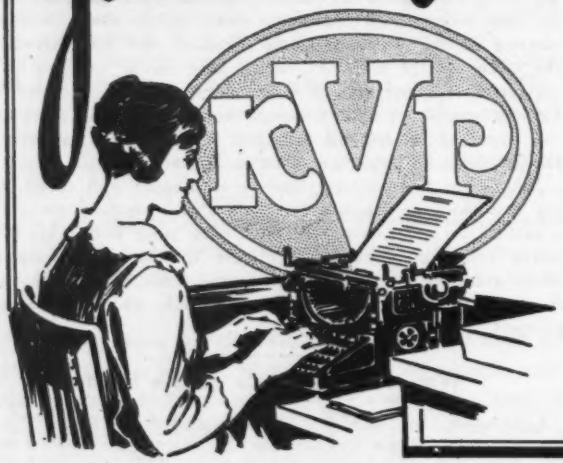
The Ernst & Ernst statement takes no account of the fact that only recently the company sold to present stockholders 18,000 shares of common stock at $20 a share, in increasing the capital from $820,000 to $1,000,000. Nor is the $500,000 bond issue indicated as part of the financial structure. Those two items incorporated in the statement give current or liquid assets of $1,602,118.32, an exceptionally strong position.

Swedish Pulp Arrives at Milwaukee

MILWAUKEE, Wis., July 5, 1926.—The fleet of ships carrying pulp from Sweden have arrived here. Arrival of these tramp steamers marks the first foreign ships to unload cargo in Milwaukee this season. The ships have around 15,000 tons of the pulp to be shipped by rail to Wisconsin paper mills.

No information has as yet been received in Milwaukee on the date of arrival of the British ships contracted to carry china clay, used in paper mills for glazing.

Uncle Jake says



You cannot gauge the amount of religion in the pews by the horsepower of the machines at the door.

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Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G.MacNAUGHTON, Secretary

The Origin of the Paper Machine*

By Ch. Groud

Even at the present time paper is still being made in vats by hand, and the product thus obtained is of very fine quality. For many centuries it was the only method known for making paper, and it was able to supply all the paper required in the civilized world. But towards the end of the XVIII century the output of the vats showed signs of being insufficient to meet the ever-growing demand. The shortage interfered considerably with the issuing of the assignats by the French Revolutionary Governments, so much so that a law was passed to prevent the paper makers from enlisting in the army.

Idea Conceived in Essonnes Mill

The idea of making paper by means of a machine was conceived in the Essonnes paper mill, where a large quantity of paper was made for the French Government. The director of the mill was Didot Saint-Léger, and the inventor was one of his foremen, Nicolas-Louis Robert.

The latter was born in Paris, on Neuve-Saint-Eustache street, on December 2, 1761, of a middle-class family in easy circumstances. He was of such a serious character that at college he was known as the philosopher. Though of delicate constitution, he had an ardent temperament, and at the age of 15 he unsuccessfully tried to enlist.

When he had finished school he entered a notary's office, but the occupation was not to his liking. In the meantime his parents had suffered financial losses. In 1780 he enlisted in the artillery and took part in the American War of Independence. In the Year II of the Republic he was proof-reader at Paris for Pierre-Francois Didot, printer, younger brother of Francois-Ambroise Didot. Robert then went as accountant to the paper mill at Essonnes, which had been ceded by Pierre-Francois Didot to his son, Didot Saint-Léger. There were at that time 300 workmen in the mill, and trouble frequently occurred between the men and the management. This is what ultimately led Robert to try to reduce the number of workmen by using a machine.

Details Regarding Invention

In autobiographical notes written on the 11th Ventôse, of the year VII (1st of March 1799), he gives the following details in regard to his invention:

"When the said Robert was acting as inspector of the workmen employed by the said citizen Didot in the manufacture of paper, the observations of the said Robert in regard to the processes and method used up to that time in paper mills, together with his knowledge of mathematics and his natural liking for mechanics, induced him to seek a means of manufacturing a sheet of paper of indefinite length, without any workmen. He devoted part of his rest hours and meal hours, and most of his spare time to this invention. As the result of several years of thought and efforts he was successful, and he built his interesting machine on a small scale. He joyfully informed citizen Didot of his invention, and the latter congratulated him and encouraged him to build it on a large scale. But as the said Robert did not posses the financial means required for obtaining the various materials which were needed in the construction of the different parts of the machine, he requested citizen Didot to furnish him the funds, and the said Robert constructed with his own hands the machine which he had invented. After he had finished building his machine, citizen Robert applied to the Government, in order that the success of the invention might be duly verified. . . ."

Robert had taken out a patent for his machine on January 18th 1799; but it was only through a grant of 3,000 francs which was given him as encouragement by the Minister of the Interior, François de Neufchâteau, that he was able to pay the patent fees.

Parts Enumerated

Robert then negotiated with Didot Saint-Léger with respect to the assignment of his patent. They were unable to come to an understanding, not on account of the price, which had been fixed by mutual consent at 60,000 francs, but because Robert did not consider the guarantees of payment offered were sufficient. A lawsuit ensued, Robert demanding that his machine be returned to him and offering to pay the value of the materials. An appraisal was made: the machine was dismantled at the time, and the appraisers enumerated the following parts:

One copper roll, 95 centimeters long, including the trunnions, by 25 centimeters in circumference.

Another copper roll 95 centimeters long, including the trunnions, one of which was square and carried a copper gear with twenty-four teeth, 15 centimeters by 12 millimeters thick.

A copper wire cloth, 3.40 meters long by 64 centimeters wide, the two ends of which were sewn together, and the two edges furnished with copper hooks and a white-thread ribbon along each edge.

A similar cloth of the same size, with longer hooks and an eel-skin selvedge on each side.

The value of the materials was estimated as follows:

Framework	$63.35
Iron and Copper Parts	784.45
Carpentry, including a chest with iron bands around it and part of the loom used for making the laid wire cloth	105.60
Total	$953.40

* Translated from *Le Papier* xxix, 425-427, April 1926, by A. Papineau-Couture.

From June, 1799, to March, 1800, Robert manufactured paper at Darnétal, near Rouen; but the output of his machine was too small, and he was unable to obtain sufficient funds to build larger machines. Finally he resumed his negotiations with Didot Saint-Léger and ceded him his rights.

Invention Taken to England

The latter went to England where he tried to make the most of the invention. He remained there five years, but without much success. Financial difficulties finally forced him to sell his paper mill at Essonnes.

During his absence the mill was under the management of Robert, who was still interested in working out various inventions (sizing with milk curd, writing machine, various lithographic and typographical process). In addition, Robert also was a poet. When the mill, at which paper was still made by hand, was closed down, Robert took back his patent rights, which had not been paid, but he did not succeed in turning his invention to account. For want of funds the patent was not renewed in 1814, and Robert went in for teaching.

Robert's machine was hand driven by means of a large handle. The stock was contained in a large oval vat, from which it was scooped out by a drum with copper blades. It fell on a small board and dropped through a slit on to the wire. The latter was driven by means of two felt-jacketed copper rolls, under which passed the sheet of pulp. The sheet was then wound around a wooden roll. Brass bars on each side prevented the pulp from running off the edges of the wire, and at the same time were used to stretch the wire transversely by means of brass hooks. The wire cloth was strengthened by an eelskin selvedge along each edge. The position of one of the rolls supporting the wire was adjustable by means of screws acting on the bearings, so that the wire could be stretched lengthwise. It was inclined at an angle which could be varied at will. This allowed of varying the thickness of the paper. The draining of the water was facilitated by a to-and-fro motion of the wire, which at the same time facilitated the felting together of the fibers.

Machine Improved

Didot Saint-Léger improved the machine by providing the head box with agitators. The stock flowed out through a slit on to an inclined brass plate, the position of which could be adjusted, thence into a small trough, and finally over a leather strip from which it passed on to the wire. The latter was not straight, but was inclined at two different angles, and the second portion sloped downwards as it passed between two rolls. The pulp was prevented from flowing off the sides of the wire near its head by means of leather belts. The wire was kept stretched by means of slanting guide rolls acting on the leather belts on each side of the wire. The two felt-covered copper rolls acted as a first press. The sheet then passed on to an endless felt band, through a second press, and was finally wound on a reel. The water which drained away and contained some of the fibers was recovered. The shake of the head of the machine was obtained by means of a ratchet wheel. Small copper rolls placed under the wire prevented it from sagging.

Numerous improvements to the machine were made, both in France and in England. In England the first paper machine started running continuously in 1804, while in France this took place only in 1816. On October 16, 1811, Léger Didot made Berte take out an importing license, while he himself took out a patent in 1818 for a number of machines.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

By Clarence J. West, Chairman

Creepers From Indo-China. F. Heim and M. Cercelet. Bull. Agence Gen. Colonies, 17, 1609 (1924) Bull. Imp. Inust. 23, 366-367 (1925). Sixteen kinds of creepers, which have not been botanically identified and are referred to under their native names, can be converted into pulp by similar treatment. In each case the samples were cut into pieces 3 to 4 mm. long and 3 to 5 mm. thick, and were digested with a 3 to 4 per cent soda solution for 2.5 to 3.5 hrs. Bleaching was effected with average facility, and yielded 20 per cent to 32 per cent (37 per cent in one case) of bleached pulp. The average yield from the whole series was 28 per cent, the paper made from the pulp was generally of fairly good quality. Some difficulty might be experienced in separating the different species of creepers, but there appears to be no doubt that good results would be obtained by treating them in admixture.—A. P.-C.

Reeds for the Manufactuer of Pulp in Russia. W. Jufieriew, M. Milieant, and A. Kogan. Zellstoff U. Papier, 5, 445-446 (Nov. 1925). Phragmites communis from the Dniest river region in Russia, yields a stalk of relatively high density and an ash content of approximately 6 per cent (of which 84.4 per cent is silicic acid, 2.7 per cent aluminum oxide and ferric oxide, 1.5 per cent calcium hydroxide, 0.8 per cent magnesium hydroxide, and 10.6 per cent alkalies, phosphoric acid, and manganese.)

It's ultimate analysis gave 5.3 per cent hydrogen, 42.8 per cent carbon, and 37.B per cent nitrogen and oxygen. The pulp content (method of Henneburg and Stomann) of the stem was 51.8 per cent (ash 9.29 per cent), and of the leaf portion, 25.52 per cent (ash 0.79 per cent.) By the soda pulp process Phragmites communis yielded 33.3-36.1 per cent pulp from the stems, and 21.3-24.2 per cent from the leaf portion. The digested fibers are 2-3 mm. long and form thin, cylindrical bodies, resembling silk. The fibers possess qualities suitable for the manufacture of bag paper.—J. L. P.

White Water Losses as Affecting Paper Costs. V. P. Edwardes, Making Paper 8, 82-86 (Sept. 1925). Discussion of the value of the paper making materials lost in white water, and of the importance and methods of recovery.—A. P.—C.

Waste Water Testing and Stock Recovery. Herdey. Zellstoff U. Papier 5, 348-350 (Sept. 1925). A recommended method for determining the fiber content in waste water is by the use of the centrifuge. The subject is also discussed from a factory standpoint.— J. L. P.

Stock Recovery From Waste Water. S. Samuelsen. Zellstoff U. Papier, 5, 308-313 (Aug. 1925). Different types of savealls are compared as to their efficiency in recovering stock from waste water. Fiber losses in hot and cold wood grinding operations are discussed and photomicrographs are reproduced. —J. L. P.

Pulping Process. G. A. Richter. Can. pat. 225,584, Aug. 11, 1925. Cellulose fibers are liberated by digesting material which contains cellulose with a solution containing sodium sulphite and sodium sulphide.—A. P.-C.

Reddening of Sulphite Pulp. Mon. Papeterie Belge. 6, 97, 99 (Feb. 1926). The reddening of sulphite is attributed to formation of free sulphur towards the end of the cook, which, under the action of traces of hydrogen sulphide, forms a white or yellowish compound with the lignin in the pulp; and this compound, under the action of oxidizing agents, gives a red coloration.—A. P.-C.

Observations on Operating Economy of the Roofing Felt Industry

By K. B. Howell, Industrial Engineer, Maplewood, N. J.

The bulk of roofing felt mills in the United States and Canada are owned and operated by concerns engaged in the manufacture of roofings, with a result that the conditions affecting the roofing industry as a whole have very largely affected the operating conditions of the subsidiary mill. During the past several years the roofing industry has enjoyed a fairly brisk trade demand, subject of course, to seasonal fluctuations but assuring a steady, if not abnormally large, margin of profit. These conditions have, naturally, not provided a great incentive toward keen insight into operating economy. At this time, certain factors bear evidence to a possible keener competition in the future, and it is felt that an expression of operating economy, in terms of the reasonable expenditures of material, labor, power, etc., will be of interest in permitting an appraisal of the relative economy of existing mills.

Removing Local Factors

It is naturally necessary in presenting any figures indicative of relative operating economy to remove as much as possible the effect of local factors, labor rates, fuel costs, freight rates, which are usually subject to little control by the operating management. Expression of costs in terms of dollars and cents too frequently reflect these non-controllable factors and throw little light on the relative economy of the manufacturing plant within the limits superimposed by the local conditions, and in some cases actually tend toward obstructing increased economy through throwing an apparently favorable reflection on certain phases of operation where an inefficient and wasteful condition is made through favorable local factors to appear reasonably in accord with fair practice.

In the following observations, based on an experience in management of a number of large roofing felt mills, and consulting studies in others, an attempt is made to avoid these difficulities by a presentation of the cost of the major operations of roofing felt production in terms of reasonable consumption of material, power and labor rather than expenditures in dollars and cents:

Roofing felt is manufactured in general from what is known as roofing rags, the lowest grade sortings from the general mixed rag collection. These roofing rags represent about 60 per cent of the total rag collection and include No. 1 roofing rags, the woolen class; No. 2 roofing rags, the cotton rags; No. 3 roofing rags, or bagging; No. 4 rags, the carpets, and No. 5, the waste clippings from tailor shops, the latter class in turn decided upon three subdivisions based on amount of paper content. Other raw materials used include various grades of waste paper, and a number of so-called "substitute" waste materials of fibrous and semi-fibrous nature. The rags are cut into small pieces in the usual type of rag cutter. The cut rags are then fed to beaters of the usual Hollander type and the stock beaten to a pulp, usually of "free" character, although as in paper manufacture the requirements of different grades of product determine largely the character of beating treatment. The paper and substitute materials are sometimes added directly to the beaters; sometimes separately treated and added later. The stock is screened through the usual rotary, or flat, plate screens and formed into a sheet of felt or paper on the usual cylinder machines. Generally a single cylinder machine process is employed, although occasionally more than one cylinder is used, and one mill employs a Fourdrinier process successfully.

A Fruitful Field for Economy

One of the most fruitful fields for improved economy of roofing felt mill operation lies in the selection of the proper raw materials. In past years, when roofing rags represented the principal component of roofing felt manufacture, the material cost very largely reflected the judgement of the purchasing department in its rag stock purchases. Latterly, there is an increasing use of so-called substitute materials, initially introduced as cheapeners and to broaden the field of usable raw materials, but many of which have important beneficial qualities, and some possess certain advantages over rag stock. The use of these non-rag materials has complicated considerably the manufacturing problem, as many of them require special treatment in beating and machining operation. It is probably still proper to measure the economy of the formula cost with the cost of No. 2 roofing rags. So expressed the monthly cost per ton of furnish in the average roofing felt mill with normal distribution of products now runs from about 80 per cent to 95 per cent of the cost of No. 2 rags, the industry averaging about 89 per cent. The variability in results is partially explainable in the different products made by different mills, but in the main is a relative measure of the efficiency and progress of certain mills toward cost reduction through alert study and attention to formula selection and experience in the use and treatment of cheaper non-rag materials. It has been clearly demonstrated that an average roofing felt mill, with average distribution of products, alert management and well grounded experience can maintain its yearly cost of furnish at a figure not exceeding 80 per cent of the yearly average cost of No. 2 roofing rags. Such a cost, as compared with the present 89 per cent figure, represents a normal saving of $4.50 per ton of product.

A Second Important Factor

The second important factor influencing the material cost of the product is the quantity of furnish consumed per ton of product. There are at present certain material losses and factors in the manufacturing operation which require the consumption of more than 2000 pounds of raw material per ton of product yield. These factors may be principally characterized as follows:

(1) The moisture content of the raw material allowed the shipper as reasonable atmospheric moisture and consequently not deducted from his invoices;
(2) The weight of baling wire similarly treated;
(3) The losses in dust at cutters and rag handling operations;
(4) The sewer and white water losses;
(5) The trash, metal and sand removed in periodic cleanups of beaters, chests and vats.

Control of the first two of these factors is largely exercised by the purchasing policy of the industry as a whole and beyond the failure of certain mills to exercise care in following recognized proper practice can hardly be reduced. In the matter of these three remaining losses, considerable individual control can be exercised, the exercise of which does much to explain the considerable variation in stock consumption in the industry, which in 1925 varied in the different mills from 2350 to 2700 pounds per ton of product with an average consumption of about 2550 pounds. In four mills the writer has found it possible by study and control of these stock losses to effect reductions of from 125 to 175 pounds per ton of product, and it is very clearly evident that with proper scientific control a stock consumption in

TECHNICAL SECTION, PAGE 13

excess of 2400 pounds per ton of product is unreasonable and can be prevented. From the present average consumption of the industry such a reduction represents a saving of about $2.40 per ton of product.

Conversion Expenditures

Passing from the material costs to the conversion expenditures we again find considerable variation in the relative economy of different mills. Labor expense is naturally influenced by size and design of mill and the local conditions of labor employment but hardly to the extent justifying certain wide variations in labor expenditure for similar nature of work. Perhaps the best gage of relative efficiency of the labor expenditure can be obtained by segregating the requirements of the four major operating departments, receiving, cutting, beating, and machining, for which we may express the normal, reasonable labor requirement as 5-man hours per ton of product. The present labor expenditure in these departments in existing mills ranges from 4½ to 13 man hours per ton of output.

In power and steam consumption we find similar differences in the expenditures of individual mills. Process steam is required in driers for drying the product, frequently as exhaust steam supplied to the heating coils of a hot-air absorption system, and occasionally in rotaries and cookers. The consumption of such steam in existing mills ranges from 2½ to 6 lb. per pound of product. Naturally the process steam requirement is materially affected by seasonal conditions, but except where rotaries and cookers are employed it is felt that an average process steam requirement in excess of 3 lb. per pound of product is unreasonable and worthy of investigation. Power consumption of present mills now ranges from 275 to 500 kw.-hr. per ton of product. While naturally mill design and equipment exercises an important influence on such consumption, an expenditure in excess of 300 kw-hr. per ton of product should be the subject of careful study with fair prospect of improvement. Sufficient data is hardly available as to power and steam generative costs and consumptions at all mills to permit an evaluation of the average probable saving to the industry. Some line on this can, however, be obtained from certain mills where it has been possible to study such consumption and where conditions were not exceptional to the general conditions of the industry. At such mills reductions in power consumption have effected savings averaging about $1.10 per ton of product.

Visualizing Power Economy in Terms of Pounds

In many mills there are not the facilities available for direct measurement of steam or power consumption, and it is accordingly customary in such mills to visualize power economy in terms of pounds of fuel (usually coal) consumed per ton of product. It must be recognized that such an expression is apt to be misleading in that it combines the efficiency of power generation with the economy of power use. The latter of these items is a factor mainly within the control of the operating management, while the former is frequently determined by the power, plant, design and layout and can only be improved upon at considerable investment expenditure. With this consideration fully recognized it is perhaps fair to state that with properly designed power plant a coal consumption somewhat under 900 pounds per ton of product can be attained, but with most existing plants consumptions as high as 1800 pounds are reasonable provided they result from uncontrollable conditions in the generating plant rather than from wastages in power use.

The remaining items of roofing felt cost represent principally the items of taxes, depreciation, insurance, supervisory salaries, and office expense, in the main not within the control of the operating management. Their proportionate effects on unit costs are, of course, reducible with increased production, but the considerable excess of the productive capacity of the industry above trade demands results normally in only limited operation at most mills. It is, of course, usually advantageous to operate close to the maximum daily capacity of the mill even in periods of limited number of days of operation monthly, and of course extremely important to obtain maximum output at times of full trade demand. Consequently, a word as to the reasonable capacity may not be here amiss. The daily productive output of certain mills is limited by cutting, beating, screening, or forming capacity but as such conditions are generally correctible without considerable expenditure the more common limiting factor to a mill's production is usually found in its drying capacity. With the variation in steam pressures and methods of steam circulation used in the dryer, the variation in ventilating systems employed, and the differences in operating practice, no set rule can be established as to the proper daily capacity of a given felt machine, but the following expression can be employed as a fair measure of the output to be expected from an average mill using 50 pounds steam, in driers, provided with reasonably effective steam circulation and employing a hot-air absorption system of recognized efficiency.

Reasonable Ave. Daily Output in Tons =
0.0003 x No. of Driers x width of sheet in inches x
Diam. of Driers in inches.

A Picture of Reasonable Economy

In presenting the previous observations it has been aimed to give to the roofing felt mill manager a picture of reasonable operating economy which will permit him to appraise his own plant operations in the light of reasonable expectations. Naturally it is impossible in making such appraisal to neglect the effect of local conditions, but it is felt that in presenting cost expenditure in terms of units of labor, power and material consumption rather than in dollars and cents a much fairer picture of comparative economy is obtained. It is further felt that the data submitted represents a reasonable conservative standard and that an average mill under efficient management can be reasonably expected to approximate the standards of economy pictured. In reviewing the possible improvements in the average economy of the industry it will be noted a possible reduction in material costs of $6.90 per ton of product. Data is hardly sufficient to permit a fair evaluation of the possibilities in saving in conversion costs but experience in several mills has indicated these savings to be possible here to the extent of at least two dollars per ton of output. On a yearly 400,000 tons of product in the industry the resultant total saving represents substantially $3,560,000. A very real consideration for an industry of such size. While certain of the savings will naturally require investment expenditure, the encouraging feature is that the greater part of them are of a nature requiring little or no expenditure beyond the exercise of study and alert management, and we believe that the present trend of the industry well warrants such careful study at this time.

Make Survey for Young's River Pulp Mill

PORTLAND, Ore., June 24, 1926.—Surveying for the proposed buildings for the Young's River Pulp and Paper Mills, adjoining the Young's Bay Lumber Company near Astoria, Oregon, was started June 23.

C. B. Gerton, chief engineer of the Delta engineering company, arrived from California to supervise the work. C. B. Vaughn of Portland, consulting engineer of the project, is also on the job.

Plans have been drawn and call for probably ten buildings to be erected on the site. They are to be build in "U" formation and include a sawmill, wood factory for cutting the timber into chips; a digester; a refining mill, and a power plant operated by hog fuel. The plant will develop 8000 horsepower.

This company was recently incorporated in Nevada.

Officials have stated that as soon as the survey is completed, construction will get under way.

Bleaching Wood Pulp

Batch Versus Continuous System

By Robert M. Boehm of Boehm & Son, Appleton, Wis.

In this comparison of bleaching by batches as opposed to the continuous method, the data will be taken entirely from my own experience in the actual operation and control of both systems. The stock bleached varied from hard kraft to a high grade Mitscherlich waxing and creping sheet. Although it is hard to get comparative figures on the two methods since few mills are equipped to use both, the results obtained have convinced me that bleaching in batches is superior to continuous bleaching especially as regards uniformity of stock produced and bleach equipment consumed.

More Modern Equipment of Both Types

In order to point out the differences between the two systems more readily it will perhaps be well to give a brief description of the more modern equipment of both types. The continuous system consists, usually of four units, each having a capacity of about 2½ tons at a consistency of 10 per cent air dry. Each unit is a vertical cylinder equipped with a worm which takes the stock at the bottom and forces it to the top, from whence it again returns to the bottom by the action of gravity. Connecting these units is a long, horizontal worm conveyor which takes a part of the stock from the top of one unit and carries it to the top of the next, where the mixing is resumed. After the stock rises to the top in the last unit the worm carries it directly to the pump box or washers.

Leading Machine of Batch Type

The leading machine of the batch type is the Biggs improved rotary bleacher. This consists of a 14 foot sphere mounted on trunnions and equipped on the inside with a set of baffles specially designed to give the stock a thorough mixing. These baffles are attached directly to the shell and as the rotary makes one revolution 3 to 4 minutes, the stock is mixed with a slow, easy motion, eliminating all worming action. Samples are taken through a valve designed for the purpose. The rotary is dumped by removing the manhole plate and turning over once, while water enters through the trunnions.

Both of the above systems are of the high density class, that is the worm type handles stock up to 15 per cent consistency and the rotary handles stock up to 30 per cent consistency.

Advantages of Batch System

The advantages of the batch system over the continuous are:

1. Production of more uniform stock.
2. Lower consumption of bleach liquor.
3. System more easily handled.
4. Exact control of system possible.

In the batch system, samples of the stock are taken at intervals near the end of the bleach and when the pulp has reached the desired color the batch is dumped and sent on to the washers. The idea of putting in a certain amount of bleach liquor and allowing it to exhaust itself is, of course, wrong and wasteful. No two cooks will bleach exactly the same and if it is intended to dump them after a definite length of time, it is obvious that the pulp will vary greatly in color and quality. Yet this is exactly what is done in the continuous system. The worms carry the pulp through to the washers, regardless of whether the pulp is up to color or over bleached.

At a consistency of 15 per cent a. d. the capacity of one unit in the continuous system is about 3 tons. When using four units the capacity of the system is therefore 12 tons. Bleaching 50 tons in 24 hours means that the stock is in the system for about 6 hours. Actually, however, some of the stock goes through in 2 hours while some remains in the system for 10 or 12 hours. This is due to the fact that the horizontal worm conveyor connecting the units will carry over whatever stock it comes in contact with regardless of whether it has made the trip down to the bottom once, or twenty times. This leaves some of the stock to revolve in one unit for a long period of time while other stock is removed and carried through the system very quickly. This has exactly the same effect as taking a number of different cooks, adding the same amount of liquor to each and indiscriminately bleaching some 2 hours and some 10 hours—and expecting to obtain uniform pulp. It just can't be done. The continuous system must be so designed that the stock which travels through fastest will be bleached by the time it leaves. The stock which remains in the system will be over-bleached or, if there is no excess bleach present, it will start "going back" in color and more bleach must be added in the last unit to bring up the color again. This increases the consumption of bleach liquor, and, since it is necessary to heat up the stock in the worm system, hastens the formation of oxycellulose, thereby greatly lowering the quality and yield of the pulp.

Something That Happens in All Pulp Mills

Let us now consider something that happens in the best regulated pulp mills. For some reason one of the digesters produces a hard or partially raw cook. In the batch system this is discovered as soon as the first sample is taken and more liquor is added to bring the pulp up to the desired color. The cook before and the cook after are treated in the usual way, the hard cook having no effect on them.

Effect in Continuous System

Now consider the effect in the continuous system. The four units are entirely filled with easy bleaching stock. The hard cook enters the first unit with an insufficient amount of liquor. It is distributed throughout the unit and part goes to the second. Here is where more bleach liquor is usually added. Now each of the first two units contains a mixture of hard, unbleached stock and soft, partially bleached stock. An excess of liquor is present which will tend to partially bleach the hard stock while it over-bleaches the soft stock. After a time, all the units will have a mixture of the two stocks, one partially bleached and one totally bleached. An excess of liquor must be present to complete the bleaching of the hard stock, but, as we know, it will also attack the soft stock, over-bleaching it, and, in warm bleaching systems, forming oxycellulose. This is wasteful as regards bleach and has a very deteriorating effect on the fiber.

A Further Disadvantage

A further disadvantage of the continuous system is that it is usually hard to get accurate figures on the amount of stock and liquor used. In the batch system these can be measured exactly, but since the continuous system has the stock and liquor running in constantly, control is largely guesswork. The liquor may be measured by means of accurate flowmeters or a very sensitive depth gauge, but the stock entering must be estimated. It is possible, of course, to strike an average over a period of time, but it is practically impossible to determine exactly the amount of liquor used for a certain cook. In a mill which bleaches a large percentage of their pulp this is an important factor and the inability to learn the bleachability of different cooks makes the process less efficient than by using the batch method, where each cook is separately and according to its characteristics, and where an exact control of the entire process is possible.

Rosin Oil Soap

The Two Following Articles Relate to An Industry Which Has Been Developed in Finland Within Recent Years. The First Article is From a German Journal, the Second From a Finish Periodical

Purification Of Liquid Rinso *

In the year 1912, the firm of A. B. W. Gutzeit & Co., manufacturers of sulphate pulp in Kotka, Finland, began investigations on the recovery of liquid rosin as a by-product in sulphate pulp manufacture, installing an experimental apparatus for the continuous distillation of liquid rosin. The clear distillate thus obtained contained about 4 per cent of unsaponifiable matter. The "Pine oil" (Tallol), on account of its large content of unsaturated acids, could not be used for making hard soap, but was suited to the manufacture of a so-called "green soft soap," which is not highly valued in Finland. They have succeeded, however, in making a solid soap which is easily soluble from the liquid rosin purified by distillation, without the addition of any other solid matter. The pitch which is the residue from the distillation is used for making marine pitch and carbon black, the latter being especially in demand. The yield of Pine Oil (Tallol) soap containing 65 per cent of fatty and resin acids varies from 25 to 30 kg. per metric ton of pulp (from pine), together with 9 to 12 kg. of pitch. From the whole production in Finland of sulphate pulp, 2.5 to 3 million kg. of "Pine-Oil soap" could be obtained, which is 50-60 per cent of the whole amount of soap used in Finland.

* From Der Papier-Fabrikant. 24:180-181 (March 21, 1926). Translated by W. P. Cutter, for Arthur D. Little, Inc.

THE FATTY ACIDS IN PINE OIL *

By Dr. Torsten Hasselstroem

Theoretical Part

Very little is known about the fatty acids in the pine oil which is obtained as a byproduct in the production of sulphate cellulose. As a technical product, it does not show uniformity of composition. The data in the literature is fragmentary; there is very little information available concerning these fatty acids, which are technically the most valuable part of this oil.

Bergstroem[1] states that these fatty acids contain palmitic acid, and believes oleic acid and linolenic acid[2] to be also present. Sandqwist[3] separated a crystalline and a liquid compound. The crystalline compound he believed to be a high molecular lacton acid. He was not able to discover palmitic acid. The liquid compound was treated with hydrogen, and stearic acid was isolated. This leads him to believe that oleic acid, and possible linolenic acid are present. The high specific gravity of the liquid compound (0.964) in comparison with the specific gravity of oleic acid (for which he incorrectly gives 0.891[4], it should be $D\frac{11.8°}{4°}$ =0.8998)[5] of linolenic acid, 0.905, and of linoleic acid, 0.921, leads him to conclude that there are cyclic acids in the pine oil.

The purpose of this research was to investigate the fatty acids in four fractions of pine oil obtained from A. Helstroem of A. B. W. Gutzeit & Co., Kotka, Finland.

The resin and fatty acids were separated, using Sandqwist's method[6], i.e., through esterification of the fatty acids with absolute alcohol and concentrated sulfuric acid. The resin acids remained unchanged when this treatment was used. They were removed by shaking the ester mixture with diluted sodium hydrate liquor. The fatty acid esters and indifferent substances were carefully distilled in a vacuum. As the boiling point curves in the experimental part of this research show, the pine oil was quite a uniform product. The curves for the different fractions of the ester mixtures show generally two maximum points. The lower fraction did not show a uniform initial boiling point. It was observed that the resin oil content was low for the lowest fractions of the pine oil samples, about 19 per cent, and was approximately 70 per cent for the highest fraction. It was also noted that the proportion of indifferent substances was greater in the first fraction of pine oil[7].

On saponification of the lowest ester mixture from fraction (1) of pine oil, it was noted that it contained about 50 per cent of indifferent substances, probably mostly polyterpenes. Of the balance, unsaturated fatty acids, about one-half was solid, and about one-half liquid.

The solid fatty acids were recrystallized from methyl alcohol, and the product was palmitic acid, as was proved by its melting point; it did not show any lowering of the melting point when mixed with pure palmitic acid. For further proof, the amide of palmitic acid was made.

From the liquid fatty acids, an unsaturated acid, as yet unidentified, was isolated, having a boiling point of 165-170°; this acid appears in this fraction of the pine oil in a quantity up to a few tenths of one per cent. The lead salt is soluble in ether and the specific gravity of the acid is relatively high, $D\frac{209}{4°}$ =0.9202. I titrated the acid, but was not able to obtain any figure agreeing with those of undecylenic acid. The undecylenic acid is formed, as is known, in the distillation of castor oil, and would therefore probably have appeared if there had been any castor oil present in the original fatty acid mixture[8]. The larger part of the liquid fatty acids had a boiling point higher than 224°C at 11 mm., and a specific gravity higher than that of oleic acid ($D\frac{20°}{4°}$ =0.9006 to 0.9031).[9]

In the investigation of these fatty acids, no specific gravity was found which was higher than that of linoleic acid. The specific gravity was uniformly somewhat higher than that of pure oleic acid. Before the specific gravity of the fatty acids was determined, they were purified by means of their lead salts.

1. The most important data only are mentioned here, for Sandqwist in "Ingeniorvetenkapsakademies handlingar," no. 10, Stockholm, 1922, has carefully reviewed the literature of pine oil.
2. Bihang til Jernkontorets annaler. 12:507 (1911); Svensk panperstid. 1911, 167; Pyhala, Suom. Teknill. Aikakauslehti. Helsingfors, 1917 110,196,271.
3. Sandqwist. loc. cit., p. 65.
4. Page 65 and note 2, p. 20. The specific gravity of pine oil is stated as 0.8908 at 11.8°C.
5. Bellstein-Parger-Jacobson. Organische Chemie 11:463. 4th. ed. 1920. Abstract from Eijkman. Rec. d. trav. chim. de Pays-Bas. 12:162.
6. Ibid. p. 39.
7. According to a private communication from Mr. Helstroem, the Gutzeit pine oil contains 4.5 to 8% of unsaponifiable substances, which agrees with the figures which I have obtained, calculated on the original pine oil. See experimental part.
8. Compare Pyhala, loc. cit. See experimental part.
9. See experimental part.

* The Finnish Paper and Timber Journal. (Pappers-och travarutidskrift for Finland). 1925. no. 22. pp. 632-638. Translated by Eric Wahlforss and W. P. Cutter. (Arthur D. Little. Inc., Cambridge, Mass.) The translation is made with permission of Dr. Hasselstroem.

The different fatty acid fractions were ozonized, and bromine derivatives were also made. The lowest fractions of the unsaturated fatty acids, purified by means of their lead salts, gave a solid bromine derivative with the melting point 178° C., which is probably identical with the hexabromide of linolenic acid.[10] By ozonization the same cleavage products were isolated which Harries[11] obtained by the ozonization of oleic acid, namely, nonylaldehyde, pelargonic acid and azelaic acid. In splitting the ozonides, carbon dioxide also appeared. This gas does not appear in splitting pure oleic acid ozonide, does always occur in connection with linolenic acid.

As a result of the research of the fatty acids of Helstroem's sample of pine oil, fraction (I,) it was found that there were present principally oleic acid, palmitic acid, a small amount of linolenic acid, and a few tenths of a per cent of an unsaturated, undefined fatty acid, which latter acid has a boiling point lower than the other acids mentioned, and has a lead salt which is soluble in ether.

The principal fractions of the fatty acid ester mixture in fraction (II) of the pine oil were saponified. The lower fraction of the fatty acid esters contained mostly solid palmitic acid; the higher fraction contained oleic acid and a small amount of linolenic acid, which gave a solid bromine derivative.

When I filtered fraction (II) of the pine oil, I isolated a large quantity of palmitic acid. This was recrystallized from methyl alcohol, and I also isolated a small quantity of an acid less soluble in methyl alcohol. This latter acid I have been able to examine only superficially, but it is probably identical with the high molecular acid of Sandqwist. The fatty acid with the low boiling point, which I obtained from the lower fraction of the pine oil, I could not find in this fraction, nor in the other pine oil fractions.

Examination of the fatty acid esters from Fraction (III) of the pine oil gave palmitic acid in the lower fraction. In the higher fraction the presence of oleic acid was shown. By splitting the ozonide, capric acid and carbon dioxide were obtained, the latter resulting from the presence of linolenic acid.

No reference has been found in the literature to the cleavage products of linoleic acid ozonide. By the oxidation of linoleic acid, there are formed some capric acid and butyric acid. As linoleic acid ozonide is the only one of the unsaturated fatty acids which can produce capric acid, and as the boiling point of the linoleic acid, as well as that of the ethyl esters, agrees with the boiling point of oleic and linolenic acid, it is concluded that linoleic acid is present, perhaps only in small quantities, in the fatty acid mixture mentioned above. It should also be noted that there was a distinct odor of butyric acid in the fission products of the ozonized fatty acids of this fraction, which agrees with the above assumption.

The fraction (IV) of pine oil showed that it contained largely oleic acid, as proved by carbon dioxide cleavage, and also linolenic acid.

It is to be noted that Sandqwist did not find palmitic acid[14] although both Bergstroem[15] and I did find it. This may indicate that the palmitic oil is possibly a secondary product. In this connection, it should be noted that oleic acid in fusion with caustic potash gives palmitic acid[16] with almost a quantitative yield.

The presence of this acid in pine oil may therefore be possibly due to the sulfate cook itself.[17]

Sandqwist's high molecular lacton acid may possibly have originated during the many distillations.

10. See experimental part.
11. Harries and Turk. Berichte d. d. chem. Ges. 39:3732 (1906); Harries. Berichte. 42:466. (1909).
12. Erdmann and Bedford. Berichte. 42:1348 (1909).
13. Bauer and Hazura. Monatshefte f. Chemie. 7:233; Hazura. Monatshefte. 8:261.
14. Ibid.
15. Ibid.
16. Varrentrapp. Annalen d. Chemie. 35:210 (1840); Edmed. Jour. Chem. Soc. Lond. 73:627 (1898).
17. Research by the author on this subject is not yet completed.

Summary

This preliminary research on the fatty acids in the refined pine oil has shown that it contains principally oleic acid; some palmitic acid; a little linolenic acid; a small amount of an unidentified unsaturated acid; traces of a solid acid, possibly identical with the high molecular lacton acid of Sandqwist; and finally, a possible small amount of linoleic acid.

Experimental Part

Raw Material

The pine oil for this research was obtained from A. Helstroem of A. B. W. Gutzeit & Co.[18] The sample consisted of four fractions, which were investigated separately. The samples had been kept over the summer, and a solid substance had crystallized from fractions (I) and (II) fraction (III) contained no crystals; fraction (IV) had become quite solid.

The solid substance from part of fractions (I) and (II) was filtered off. The solid substance, dried on an unglazed procelain plate, were dissolved in methyl alcohol. A small amount of a less soluble substance was separated, and retained for later investigation. This is probably identical with Sandqwist's high molecular acid. The principal part crystallized in silver shining scales with a melting point of 62° C. These scales consisted of palmitic acid; for the substance did not show any lowering of the melting point when mixed with pure palmitic acid.

Titration.
0.01075 g. acid required for neutralization 4.08 cc of 0.1 N NaOH, instead of 4.2 cc, as calculated for a mono-basic acid $C_{16}H_{32}O_2$.

Separation of Resin and Fatty Acids

Sandqwist's method, somewhat modified, was used; it employs absolute alcohol and concentrated sulphuric acid. The fatty acids were esterfied and the resin acids remained untouched.

100 g. of pine oil were diluted in 600 cc. of absolute alcohol, and 50 cc. concentrated sulphuric acid were added. The mixture was heated on a water bath in a round bottomed flask furnished with a condenser for distillation. When about 300 cc. of the alcohol had distilled off, which took about half an hour, the heating was stopped. After the remaining mixture had cooled, it was shaken three times in a large separatory funnel with a 10 per cent solution of common salt. Then the mixture or resin acid and of fatty acid ester was treated with twice as much ether; the ether solution was treated with four liters of 1 per cent sodium hydrate solution. The ethereal solution was dried over anhydrous sodium sulphate, and after removing the ether the residue, containing the fatty acids and the indifferent substances was fractionated in a vacuum.

The resin soap solution was acidified with diluted sulphuric acid and the resin acids dissolved in ether.

After removing the ether the resin acids were obtained in perfect crystals.

TABLE 1

	Yield from 300 gms. Pine Oil	
	Fatty acid esters and indifferent substances	Resin acids
	g.	g.
Fraction I	260	51
Fraction II	251	58
Fraction III	200.5	90
Fraction IV	178	128

Research of the Fatty Acid Esters

Fraction I of Pine Oil

For the distillation of the fatty acid ester mixture from Fraction 1, 520 g. of esters were used. After 11 distillations the following diagram was obtained.

The boiling point curve of the esters from fraction (I) shows no well-defined maximum distillates below 212° at 11 mm.

There are well-defined maxima at 212-214°, and again at 221-223°. The fractions investigated were: up to 212°; 212-214°; 221-223°; and 223-240°, all at 11 mm. pressure.

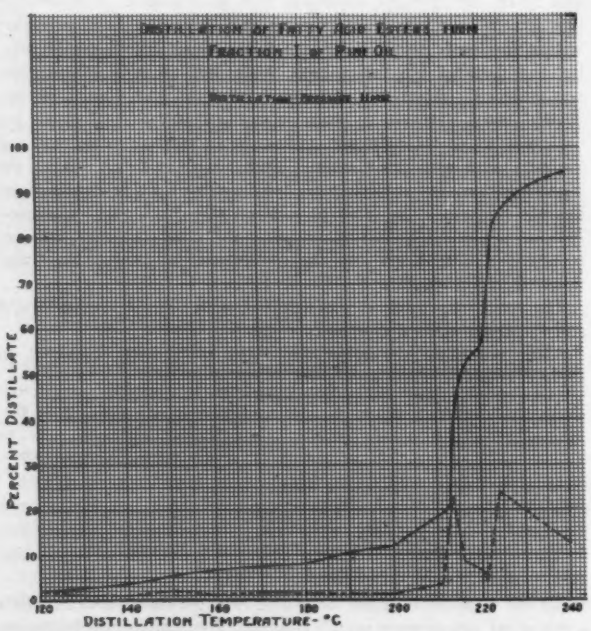
18. One of the translators (Wahlforss) happened to be present when the samples for this research were sent to Dr. Hasselstroem. As he remembers, the wood mixture used at this time was a mixture of spruce (75%), *picea alba*, and pine (25%) *pinus sylvestrias*. See the article which precedes this: "Purification of liquid resin."

Saponification of Fatty Acid Esters Fraction I of Pine Oil

Thirty-five g. of fatty acid esters were dissolved in 75 cc. of ethyl alcohol, and 7 g. of potassium hydrate in 7 cc. of water were added. The mixture was allowed to stand over night, and the alcohol was distilled off on the water bath. The soap formed was dissolved in 500 cc. of water, and the solution extracted with ether, which removed the indifferent substances. The ether solution was dried with anhydrous sodium sulfate, the ether evaporated, and the residue weighed.

The soap solution was acidified with diluted sulphuric acid, and treated with ether, the ethereal solution dried and the ether distilled off. The remaining traces of ether were removed in a vacuum desiccator. The fatty acids thus obtained from the two lower fractions (below 212°, and 212-214°, at 11 mm.) became partly solid. The two higher fractions remained liquid. After filtering off the solid part, the liquid fatty acids were changed to their lead salts, which were again extracted with ether.

Twenty g. of the liquid fatty acids were diluted in 22 cc. of 50 per cent. NaOH and 67 cc. ethyl alcohol. The liquid was neutralized with acetic acid, using phenolphthalein as an indicator. 500 cc. of a 7 per cent. acetate solution were heated to boiling and the soap solution slowly added. In cooling the lead soap was precipitated on the walls of the vessel. The clear liquid was removed, and the remaining lead salts were washed with 300 cc. of boiling water. After removing the balance of the water, 500 cc. of ether were added, the flask heated to boiling on a water bath and left standing for 12 hours at room temperature. The ether solution was filtered and the undissolved lead salts were examined separately.



The ether solution was shaken with diluted hydrochloric acid, washed with water, and dried over anhydrous sodium sulphate. On distilling off the ether, the unsaturated fatty acids remained.

The following table shows the yield of solid fatty acids, unsaturated fatty acids, ether-insoluble lead salts, and indifferent matters, all figures calculated on the original ester mixture.

TABLE 2

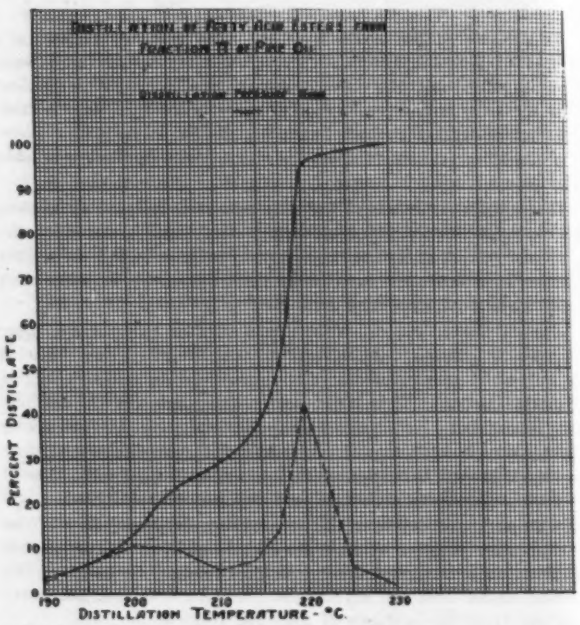
	Pine Oil, Fraction I			
	to 212°	212-214°	221-223°	223-240°
Solid fatty acids %	14.1	10.5	...	...
Unsaturated fatty acids %	18.3	47	65	70
Ether-insoluble lead salts %	12.7	22.7	15.3	2.6
Indifferent substances %	46.6	17.0	13.3	15.6

TECHNICAL SECTION, PAGE 18

Research on the Solid Fatty Acid Compound, Fraction I.

The solid substance, dried on an unglazed porcelain plate, was recrystallized from methyl alcohol. After two recrystallizations, the substance showed a melting point of 62° C., the crystals were colorless, silvery scales. No lowering of the melting point was noted when the sample was mixed with pure palmitic acid. The palmitic acid amide was prepared, as further proof.

According to Krafft and Stauffer,[19] molecular amounts of



palmitic acid and phosphorus pentachloride were mixed in a round-bottomed flask and heated on a water-bath. After the reaction was complete and the mixture had cooled, strong ammonia solution was added, and the product was filtered and recrystallized from alcohol. The palmitic acid amide had a melting point of 104-105°C.

Research on the Liquid Fatty Acids Fraction I.

The unsaturated fatty acids purified by means of their lead salts were fractionated in a vacuum. The results, from fractions below 212° at 11 mm., and 212-214° of the ester mixture, were as follows:

(1) 165-170° C. 2.2 g. $D\frac{20}{4} = 0.9202$

(2) 224-233° C. 8 g. $D\frac{20}{4} = 0.9031$

(3) 233-240° C. 10 g. $D\frac{20}{4} = 0.9005$

The pure unsaturated fatty acids from the highest fractions had a constant boiling point of 234-236 at 11 mm., and a specific gravity of $D\frac{20}{4}$ of 0.9006.

About one gram of each of the above fractions was dissolved in glacial acetic acid and bromine in glacial acetic acid was added while cooling until the mixture was distinctly brown. A quantity of alcohol corresponding to double the quantity of the liquid mixture was used. After 24 hours, a colorless precipitate was formed in the two latter fractions, the first fraction remaining clear. After adding water, more substance was precipitated in the two latter samples. The melting point of this bromine derivative was 176-178°C.

19. Berichte. 15:1728 (1882).

The bromine derivative is without doubt identical with the bromine derivative made by Bergstroem[20], and identical with the hexabromide of linolenic acid[21]. For comparison, the tetrabromide of linoleic acid has a melting point of 114-115°C[22]., and the dibromide of oleic acid is liquid[23].

Fractions (2) and (3) were ozonized in chloroform solution[24]. I obtained from fraction (2), 3 gm. in weight:

Nonyl a'dehyde	0.5 g.
Pelargonic acid	0.4 g.
Azelaic acid and its half aldehyde	1.0 g.
Loss	1.0 g.

From fraction (3), 9 g. in weight:

Nonyl aldehyde	2 g.
Pelargonic acid	2 g.
Azelaic acid and its half aldehyde	3 g.
Loss	2 g.

In addition, the ozonides yield carbon dioxide.

Research on the Ether Insoluble Lead Salts

All ether-insoluble lead salts obtained in this research were mixed together, treated with hydrochloric acid, and extracted with ether. After removing the ether, a solid product was obtained which was dried on an unglazed porcelain plate. The substance was recrystallized from methyl alcohol and showed a melting point of 62°C., corresponding to palmitic acid.

Research of the Fatty Acids in Fraction II

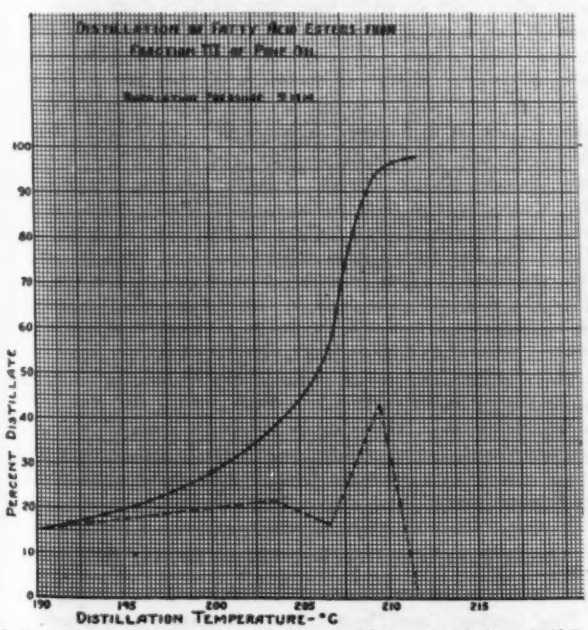
For distillation, 251 gms. of ester mixture was used. After 11 distillations, the following result was obtained:

The fractions up to 210°C., and 217-220°C. at 11 mm. were investigated. The following result was obtained:

TABLE 3

	Pine Oil, to 210°	Fraction II 217-220°
Solid fatty acids %	35.7	...
Unsaturated fatty acids %	17.0	80
Ether-Insoluble lead salts %	12.7	11
Indifferent substances %	32.9	12.5

The distillation result of the unsaturated acids of the fraction



below 210°C. at 11 mm. showed a boiling point below 234°C., D_4^{20} and a specific gravity of 0.9001. The bromine derivative showed a melting point of 178°C.

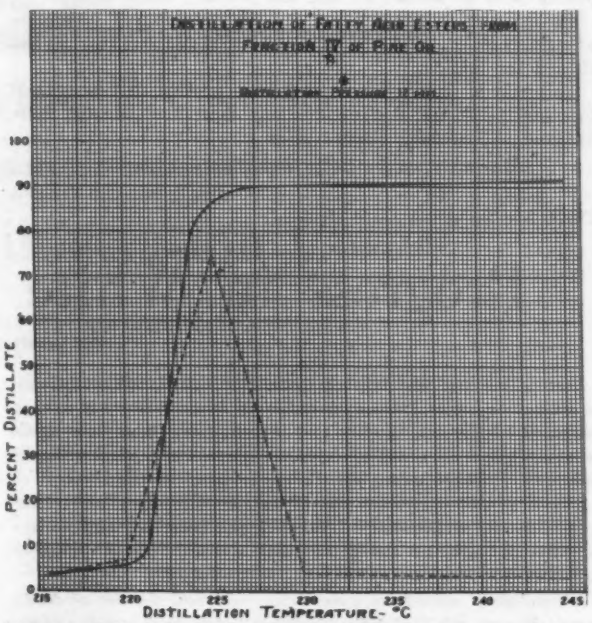
The fatty acids of the higher fraction showed a constant boiling point of 236-240° at 11 mm. They were mixed with the unsaturated fatty acids of Fraction IV of the pine oil. The solid fatty acid in this fraction was palmitic acid melting point 62°C. The balance was oleic acid mixed with a small amount of linolenic acid.

Research on Fatty Acids in Fraction III.

200.5 g. fatty acid esters were used.

After distilling nine times, the following result was obtained:

In saponification the lower principal fraction became partly solid and the solid part was identified as palmitic acid. The



higher principal fraction remained liquid and was ozonized in chloroform solution. I used Harries method.[25]

Twenty gms. unsaturated fatty acids, purified by means of their lead salts, were dissolved in 100 g. of chloroform and ozonized while cooled with ice and salt. The chloroform was distilled off in vacuum, and to the residue, a thick oil, a volume of water corresponding to ten times the volume of the liquid mixture was added. The mixture was then heated three hours on a boiling water bath. A considerable amount of carbon dioxide was split off, apparently on account of the presence of linolenic acid. Pure Oleic acid ozonide does not give off carbon dioxide when splitting with water[26].

The water solution was separated from the oil, which floated on the surface. This oil was dissolved in ether and shaken with sodium bicarbonate solution. From the water solution a colorless acid crystallized with a melting-point of 104-105°C., identical with azelaic acid.

The ether solution with the neutral substances dried with anhydrous sodium sulphate had the ether removed, and the residue was distilled in a vacuum. After two distillations the following results were obtained. 18 g. substance taken.

Fraction (1)	50-60° C.	4 g.
(2)	60-135° C.	0.25 g.
(3)	135-145° C.	4.5 g.
(4)	residue	6 g.
	Total	14.75 g.
	Loss	3.25 g.

Fraction (1) contained nonyl aldehyde, which was identified by means of nonyl semi carbazone, melting at 84°C.

Fraction (2) was unidentified.

Fraction (3) contained mostly pelargonic acid which acid was titrated. 0.1178 gram of acid required 7.32 cc. of 0.1 N NaOH, instead of 7.2 cc. as calculated for a monobasic acid, $C_9H_{18}O_2$

20. Ibid. p. 511.
21. Erdmann and Bedford. Berichte. 42:1329
22. Bellstein-Prager-Jacobson. Ed. II:387.
23. Hazura. Monatshefte. 8:149; Overbeck. Annalen. 140:42.
24. See further research on unsaturated acids in Fraction III.
25. Ibid.
26. Harries, l.c. Erdmann and Bedford. l.c.
27. Harries. l.c.

Fraction (4) was not analysed. It was solid and contained without doubt mostly the half aldehyde of azelaic acid.

The sodium bicarbonate solution was acidified with dilute hydrochloric acid and distilled with steam. A small amount of fatty acid was obtained. From the residue in the flask azelaic acid was isolated, with a melting point of 104-105°C.

The product from the steam distillation was extracted with ether and after removing the ether the residue was distilled under ordinary pressure. The first few drops obtained had a strong smell of butyric acid. The principal fraction had a boiling point of 208-214°C., and was probably capric acid.

On titration, it required for the neutralization of 0.1080 gm. of acid, 9.26 cc. of 0.1 N NaOH, instead of 9.31 cc., as calculated for $C_8H_{16}O_2$.

This acid is probably a decomposition product of linoleic acid. Fraction (III) of pine oil contains therefore palmitic, oleic, linolenic, and probably linoleic acids.

Research on the Fatty Acids in Fraction IV.

178 grams of the fatty acids were distilled 5 times in vacuum. The following curves were obtained:

After saponification and purification, no solid fatty acids were obtained, but (calculated on the original quantity of esters):

78 per cent unsaturated fatty acids
4 per cent indifferent substances
7 per cent lead salts.

The unsaturated fatty acids, specific gravity $D\frac{20}{4} = .9001$ were ozonized in the manner described for fraction (III,) and the following result was obtained: (17 g. substance)

Nonyl aldehyde	4.5 gm.
Pelargonic acid	3.5 gm.
Residue	5.0 gm.
Total	13.0 gm.
Loss	4.0 gm.

The azelaic acid obtained from the water solution weighed 2 grams.

The amount soluble in sodium bicarbonate was 17 grams; no acid was obtained in steam distillation.

Progress in White Water Reclamation*

By George D. Bearce

During the last two or three years the activity of many mills in reclaiming paper making materials in white water has greatly increased. Individual studies and investigations have been made by many plants in order to determine the volume of fibre losses and what practical means can be employed to reduce them.

The first and most important principle that many mills have applied to the reclamation of fibers is the reuse of white water in different parts of the plant, and, in many cases, on paper machines.

A number of mills have gone extensively into the use of white water showers on the paper machines with very good results. One mill that purchases fresh water from a city supply uses white water showers on the Bird screens and on all wire showers excepting the one near the breast roll and a fresh water jacket shower. This mill has been able to cut down its consumption of water to approximately 2,500 gallons per ton of finished paper. It is highly important to economize in the use of fresh water because it is a definite expense and in this case is shown up every month through the charges from the city. In order to interest the machine crews in saving fresh water, a *daily chart of water consumption* is posted on the bulletin board in the machine room and this has materially assisted in reducing the water used.

An average figure for water consumption in a news mill is 15,000 gallons per ton of paper produced. The importance of holding the consumption of water down to a minimum is illustrated in the following example. Using an estimated figure of 6 pounds of fiber per 1,000 gallons of water as the consistency of the effluent leaving the mill the following figures are calculated:

Paper Production 100 Tons Per Day—Assumed Value Reclaimed Fibre $40 Per Ton

Plant A	*Plant B*
Water Consumption 2,500 gals. Per Ton of Paper.	Water Consumption 15,000 gals. Per Ton of Paper.
Loss	*Loss*
15 lbs. Per Ton of Paper.	90 lbs. Per Ton of Paper.
1,500 lbs. Per Day.	9,000 lbs. Per Day.
$30 Per Day.	$180 Per Day. .. ..
¾ of 1% of Paper Production.	4½% of Paper Production.

These figures are theoretical, but suggest the value of utilizing white water in every possible way.

The improvement in stock saving equipment has been very obvious and many mills have adopted the most efficient and modern kinds of savealls. The two principal types are (1) sedimentation and (2) filtration.

The sedimentation system of reclaiming stock appears to work most satisfactory on white water that contains a certain percentage of clay or filler. Many big mills are using various sedimentation stock savers with very effective results. This system also works in a satisfactory manner with other grades of paper.

The filtration type of saveall has been improved by the use of the vacuum. It is, however, necessary to form a mat of long fibered pulp over the face of the filter type saveall in order to obtain the most effective results. A large Canadian news mill that has always made a close study of white water losses recently made an installation of a continuous filter type of saveall and found that they were able to reclaim 5 tons of stock per day in the white water. This amounted to a saving of approximately 1%. The equipment was used in conjunction with the groundwood deckering system and resulted in a reduction of number of deckers required as well as lower fiber losses.

There is still much to accomplish in the problem of reclaiming paper making materials in white water leaving the plant. Improvements in stock saving equipment, better reuse of white water, and closer control, should enable mills to reduce their operating losses in news print to approximately a 1% of production of finished paper.

* News Print Service Bulletin.

Uncas Paper Co. Receiver Shows $89,452 Balance

[FROM OUR REGULAR CORRESPONDENT]

NEW LONDON, Conn., June 5, 1926.—The account of Frank W. Browning, receiver for the Uncas Paper Board Company, for the period from April 3 to June 15, 1926, which showed a balance of $89,452.42, was approved by Judge C. Simpson at a short calendar session of the superior court at Norwich, in the case of H. G. Craig & Co., Ltd., et al, against the Uncas Paper Board Company.

Compensation in the amount of $1,500 was awarded to the receiver, while a motion for allowing compensation to accountants was continued.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

Distributing Administration Costs*

By Leon E. Vannais, President, The Vannais Inst. of Commerce, Hartford, Conn.

My subject tonight has been discussed at National Conventions and the papers and the discussions have been printed in the Association's Year Books. There have also been official publications that either wholly or in part have added to our available literature. I understand that at a recent meeting of your Chapter administration costs were mentioned in connection with the announced subject, Distribution Costs.

For me to come here and ignore the previous thought of our Association on this subject would be folly. For me to assume that the work of the National Organization and its Chapters has no cumulative value would be to ignore the experience of my own Chapter at Hartford. It seems to me best to assume that what has been covered is to a certain extent familiar to this group. I know there are men here who have neither attended national conventions nor read the year books. There are some who do not read the official publications. Nevertheless, all of the papers to which I will refer are published, are available and can be obtained. Much, therefore, that has been covered I will ignore, and some that has been published I will quote or condense. Anything that I may add will be my small contribution not so much to the question of Distributing Administration Costs, but rather to the many questions which have arisen in my consideration of the available material on this subject; material which I had originally hoped to revise, re-arrange, and present as new to you.

The Subject Defined

In the preparation of my paper, I wanted a logical starting point. Immediately the obvious idea cropped out, "Why, of course, define the subject." When I began to run into difficulties in defining any one of the three words, distributing, administration, and costs, I looked to see what other Association men had offered.

From the 1924 Year Book, I quote William O. Cutter, a vice-president of the U. S. Rubber Company and our National Treasurer.

"You have probably observed that the title given to the subject for this session reads 'Selling and Administrative Costs,' whereas, I believe, it is customary to refer to the expenditures falling under these headings as expenses, Selling and Administrative Expenses. But, after all, this is merely a distinction in terms, because, obviously all the expenses of a business are costs, and the importance of the matter lies in their proper segregation so that they may be studied and measured against the effort which created them and against the results created by them."

At the same convention, but at a different session, under the general session subjects, "Debatable Points in Cost Accounting Theory," the specific question of interest to us tonight was "Should Administrative Expense be charged against manufacturing costs?"

"The debatable point is whether every expense should be assigned either to manufacturing cost or to selling cost, or what, if any, items shou'd be deliberately grouped as 'administrative' and charged directly against gross profits (rather than included in cost of goods sold or selling expense).

"The only items which everybody must admit are administrative, as distinct from the cost of manufacturing or selling, are directors' fees, expenses in the Secretary's Office in a large corporation keeping corporate records and stockholders' records, and operations in the Treasurer's department to pay dividends. One school of thought insists that every other conceivable outlay connected with the business can be and should be charged against manufacturing or selling. In a small business, or a so-called private corporation (with a minimum number of stockholders), the adoption of this view means for all practical purposes that administrative expenses do not appear as such in the Profit and Loss Statement."

A Contrasting Attitude

Contrast this attitude with that expressed in one of the official publications (Jan. 2, 1925), in Mr. Higginbotham's paper originally presented at the Annual Conference of the British Institute of Cost and Works Accountants in 1924—

"Our present concern is with administration and organization in the economic sense—as applied to industry and its operations. . . ."

"We may now state that function, therefore, as comprising, under the heading of 'Administration.'

"1—The maintenance, substitution, or modification of the productive plan.

"2—The maintenance and replacement of installation and equipment, and the continued supply of materials of manufacture and operation.

"3—The maintenance of the human organism itself, and the service, control, and direction of its actions in accordance with the general purpose, as originally conceived or as modified or substituted.

"Such I conceive to be the function of administration in

* From N. A. C. A. Bulletin.

industry: essentially personal, and inherently one of co-operation and service. . . ."

In the same Official Publication a second paper appears. It is by Andrew Stewart, and was also originally presented at the same British Institute Conference. Mr. Stewart says:

"I think that the expression 'Administrative Cost' evokes in the mind of each of us a very similar conception, and any variations can only be such as will have little effect on the problem. It conveys to us, I think, the cost of the service of administering the business as a whole, and accordingly must cover both the production of the article and the distribution thereof, and the truest reflex of the position is not obtained by regarding administration as a function apart from producing or selling, but rather that it may be, and generally is, most intimately connected with both functions, and should be so apportioned, although any allocation should be made in such a way that the identity is not obscured."

Question Not Clear

The few examples chosen will well indicate why I feel no desire to add another definition to the many that exist. Analysis of the other publications does not tend to clear up the question. A perusal of the heated discussions that have occurred at the various conventions emphasizes the lack of any stable basis from which thought on this phase of our work develops. But this implies no criticism of the men to whom I referred or whose articles I have quoted; these men are authorities whom all must respect.

Since accepting your invitation to speak, I have quizzed every executive and professional accountant that I have met regarding this question. Practical expedients I find; practical methods that apply under specific circumstances are common; intelligent application under varying conditions are met; but a general philosophy that stands firm by its own principles, an underlying theory that governs to some extent the modifications demanded by expediency —these I have not found. There is plenty of valuable practical material on statistical and accounting analysis which has been ably presented by others. I am, therefore, going to attack this question from a different point of view than I originally planned.

Limits of the Work

Much has been said about the wonderful possibilities of accounting, its field, its scope, its value to industry. Much will be said in the future, for the need for intelligent accounts will, in the opinion of many increase for years to come. If, therefore, I take this opportunity to emphasize the limitation of accounts, surely you will not assume that I deprecate their value. The fact that I look forward to a life work in accounting education should prove that I am sincere in my belief, that accountants do have a vital place in industry, and that I would naturally prefer to talk about the wonderful field, the limitless opportunity, the boundless scope of the work.

Many will continue to emphasize this side of the work; so will I. But I do honestly feel that a little more attention should be paid to the limits of our work, to the boundaries which do exist. If, therefore, I go back to fundamentals which are not mentioned enough, if I lay the pressure on how little accountants can do rather than how much, it is because this particular subject furnishes striking illustrations of the many important factors in the profitable conduct of a business that are not and, in my opinion, will never be specifically shown in accounting records.

Taxable Income and Accounting Bases

Let me start this general part of my talk by a quotation from a paper by G. O. May on "Taxable Income and Accounting Bases for Determining It." The paper was read before the American Institute of Accountants and published in the October, 1925, Journal of Accountancy. Mr. May, the senior partner of Price, Waterhouse & Co., is regarded by many as one of the foremost accounting authorities in the country.

"Gain in commercial business is, however, usually not a separate item but a difference between items on opposite sides of the account. On one side are the proceeds of sale, on the other, the costs involved in producing the sales. Frequently also the gain is the result of a series of transactions or a gradual process extending over two or more distinct tax periods. If a taxpayer buys raw materials in one year, manufactures finished goods therefrom in another, sells those goods in a third and collects the proceeds in a fourth year, the ultimate gain is obviously not attributable wholly to any one of these four years nor is there any way of allocating portions of the gain to the operations of the several years which can be said to be the scientific and only proper way. In one such series of transactions the main factor contributing to the gain may be cheapness of buying, in another low cost of manufacture, in another advantageous selling and so on. Further, the transactions of a taxpayer are frequently so interrelated that we cannot ascertain the profits of any given series separately. Commercial profit is in fact, as an eminent English judge puts it, necessarily a matter of estimate and opinion.

"In the determination of income for commercial purposes, the best practice is to be governed by considerations of conservatism. Profits are not taken except when and to the extent that they are received or at least reasonably assured. Losses that are foreseen are provided for even though not actually sustained or measured. . . .

"It should be said at once that Congress has shown no disposition either to tax income not received or to deny losses actually sustained. Indeed, in at least one important instance it has deliberately allowed the anticipation of potential losses. The provision in the 1918 act that inventories shall be taken on the basis conforming to the best trade practice was enacted with the knowledge that one of the best trade practices was to value inventories at cost where cost was less than market, and at market where that was less than cost, thus anticipating a loss wherever market might be below cost. This recognition of one of the best established of those trade practices which find their justification not in logic or scientific considerations, but in conservatism and practical wisdom is very significant. In 1921 also the law was amended to permit deduction of a reasonable reserve for bad debts instead of only those ascertained to be worthless, thus recognizing another well established trade practice."

True Scope of Accounting

I want to emphasize several parts of this quotation as they seem to indicate clearly the true scope of intelligent accounting.

"Profits are not taken except when and to the extent that they are received or at least reasonably assured."

This is a generally accepted fundamental principle. It is one of the fundamental bases upon which all commercial and industrial accounts are built. The fact that profits should not be anticipated dictates for one thing that we value our assets at cost. Valuation of assets at cost means that we keep track of the money that has been received from investors and creditors, and the undistributed profits that *have* been realized, and by proper accounts show how that money is spread in our various assets. Elementary principles, you say. Surely, it is! But it is one of the confining limitations in accounting work. Acceptance of this principle means that we are recording investment in dollars, either paid in or earned and undistributed.

Another Illustration

As another illustration, take the two terms, present investment and present worth. Determination of present worth is, as I view it, never the object of the accounts of a going concern under ordinary circumstances. Present investment in dollars means that a piece of land bought ten years ago, unused and unimproved remains on the records at its cost in dollars; dollars that do not have the same basic value today that they did then. And, more important, the location of the property, relatively viewed, may be vastly different than at the date of purchase. Present invest-

ment and present worth are very different, if worth means value. A simple illustration! True, but very tangible as an illustration of the definite limitations that we place on our accounting records when we accept the basic principle that profits should not be anticipated.

A rather common intangible asset is goodwill. Under our principle of recording investment, we set up goodwill when we buy it. At that price it remains. Profits from the time acquired may disclose a greater or less value, but good accounting theory dictates that the amount of the investment remain unchanged. Much more goodwill is built up than is bought, yet goodwill that is not acquired by purchase remains unrecorded as such. Valuable goodwill built up by a successful business shows up in the net profits to the satisfaction of all concerned and nowhere else. These simple illustrations do indicate that much business information of value never gets specifically recorded in accounts.

Further development of this thought has always interested me, but I will merely add this one comment. Expediency may cause well advised modification of the sound principle of limiting our accounts to the recording of present investment. Witness the recording of appreciation of assets to the March 1, 1913 value for income tax purposes. Yet in New England at least a large portion of the appreciation so recorded corrected previous excessive depreciation written off before the government had a financial interest in profits.

Providing for Forseen Losses

There is one other generally accepted accounting principle that is ably praised in Mr. May's paper. "Losses that are foreseen are provided for even though not actually sustained or measured." This principle is so generally accepted and followed that comment is unnecessary.

"Present investment with possible losses provided for"—does this not furnish the boundaries within which accounts should be confined? Within these boundaries, the determination of commercial profit (again I quote) is in fact "necessarily a matter of estimate and opinion."

My reason for giving such prominence herein to the development of this simple basis is because in my attendance at cost conventions, cost conferences, cost meetings and in my reading of official publications, I find practically no cost accounting ideas advanced which cannot be tested by this simple principle.

The carrying of inventories at standard costs in periods of low production, for example, is entirely consistent with it. Provision for depreciation on the basis of replacement values, and the inclusion of interest as an element of cost violate the principle These questions, however, are outside the scope of our present discussion.

I have indicated broadly, and perhaps too briefly, that there are many tangible things about any business, that accounts as we know them, cannot show. I have mentioned in my brief discussion, so far, important information regarding the value of a company's assets that is purposely ignored in the accounts. In the accounting records we purposely confine ourselves to keeping track of what money has been received and from whom and for what purposes money has been spent. Surely this is information of a very limited nature. And despite the definite limitations of this point of view, despite the fact that we are dealing with the most definite information in business, the extent of actual expenditures, the final result of our accounts is still necessarily a matter of estimate and opinion.

In reviewing Mr. May's valuable paper, it is obvious that the principal difficulty is not one of establishing the final figure of profit. The difficulty is in allocating the profit to the particular period to which it properly applies. The difficulty is that business, capably managed by executives whose salaries fall under administrative costs, keeps on going continuously. The incessant cycle of transaction keeps moving. It is this constant business progress that makes allocation of profit to specific periods difficult. The time element by itself makes our accounts a matter of estimate and opinion, and this is one of the factors that has caused much of the discussion regarding distributing administration costs. There is at least one other factor which I want to mention later. But let us take up this time factor first, for it has received considerable attention in connection with this subject.

Criticizing Profit and Loss Statements

Some accountants look at our usual profit and loss statement and criticize it in the following terms:

"Well, look at the meaningless thing. First you get net sales for the month. It says nothing about *when* the orders were obtained, but nevertheless these are the sales for the month. Deducted therefrom is the cost of manufacturing the goods sold. Fair enough! We have the standard cost computed, the variations due to operations shown separately in the manufacturing section, and the loss due to idle capacity thrown down below according to scientific analysis. We cost men surely have done a fine job on that item. We have allocated manufacturing cost against sales in good shape, but look at the rest of this poor affair.

"Here are selling expenses for the period. Nothing to do with these sales. Look at these administrative expenses. No relation at all to these particular sales. Financial income and expense! Often relatively unimportant but certainly not applicable to these sales. Why, this is terrible! Here is the next big field for cost men. Let us allocate selling and administrative costs to the sales to which they apply. Then we will be charging these off *when* they should be charged."

Another accountant looks at the abused statement and uses one of George Arliss' best lines in The Green Goddess, "Ridiculous, isn't it?" As if administration were something apart from production and distribution! Apply the administration expenses to production and to distribution. But usually he does not state to what production or when it will be sold. Here enters the other important factor that is especially peculiar to administration and to a lesser extent to selling expenses.

In manufacturing, practically all effort is spent on the production of a specific output. The accounting problem is one of determining how to allocate the total manufacturing costs to the actual production. This is scientifically practical because, first, the bulk of the total cost does truly apply to what has been produced, and second, each operating time unit is practically uniform in value with each other similar operating time unit.

Synonymous Terms in Manufacturing

In manufacturing costs "what you spend your money for" and "why you spend it" are usually synonymous.

In selling expenses this is not so true. An explanation of "what you spend your money for" may not answer "why you spend it." You may pay straight commissions on sales. Commissions account will tell you what you spend your money for; it does not explain fully why you spend it. I have never heard of a straight commission proposition that meant salesmen's contact with buyers alone. Contact with former customers is maintained, prospective customers are developed. Work for the company by salesmen is demanded which does not show up at all in this month's sales and this month's commissions. Selling effort is spent and paid for that does not produce current sales and may never produce future sales, so the selling problem differs from the manufacturing problem. Some selling effort produces current sales, some sales effort will assist in producing future sales, some sales effort is permanently unproductive. Furthermore, sales effort does not as readily lend itself to analysis as productive operations. The same amount of sales effort that closes one large order may be necessary to obtain an order one-tenth as large. The same sales effort may just miss out in competition and no order, large or small, result. All of this effort is paid for, all of it is essential.

Determining Salesmen's Pay

Mr. Crockett in his splendid talk at your International Conference brought out clearly that the important point in sales budgeting and distribution is the determination of how much you can

pay to salesmen. It makes little difference how you pay them. The method of payment, the basis of compensation, these are important details, but the big thing is the net profit either in total or by lines to the company on the sales produced.

Among administration costs are found the most glaring examples of difficulty in allocation to specific periods or sales. In executive salaries you have the item which tells most easily what money is spent for but it is the item for which it is most difficult to tell why the money is spent. The discussions at conventions have been eloquent and humorous. Executive's trips to Europe have been laughed at and envied. Executives with smoothly functioning organizations have been likened to well-oiled machines. The executive has been pictured as too proud to make time studies of his daily stint.

Let me cite another practical example, also from Mr. Crockett's contribution to your recent conference. He told of work done by the New York Telephone Company in making a real study of their expansion program. The detail involved, the executive thought demanded can be appreciated to some extent when you realize that a five-year program involving 10,000 new telephone units per week was adopted—a program which has been followed according to schedule for the past two years. I wondered as he spoke whether or not the heavy administration cost had been set up by the company to be allocated to the business obtained from the increased facilities. Yet the definiteness of this program would lend itself admirably to the arithmetical gymnastics necessary to solve that problem.

One of the men whom I quoted earlier said, "Such I conceive to be the function of administration in industry; essentially personal, and inherently one of co-operation and service." Co-operation such as the General Electric Company gets from its organization may be an extreme example, extreme in that it reaches way down the functional chart to its direct labor. According to a news item, the General Electric paid over $30,000 for ideas from its employees, paying a maximum of $500 each and accepting 26% of the suggestions offered. Would this money be distributed to the productive departments benefited? Perhaps. The significant thing to me, however, is the large percentage of ideas accepted. And yet excutive attention was given to the 74 per cent which were not used.

Why Executives Are Highly Paid

In fact, is it not true that this illustrates rather forcefully one of the intangible reasons why executives are highly paid? Is their salary merely for the things regarding production and distribution which they decide to do? Is not their greatest value to a successful concern in the deciding of what not to do, in rejecting unwise plans, in insisting that good ideas be well worked out before adoption? Is it not reasonable to suppose that executives are highly paid in order to prevent loss, that this ability is at least equal to their ability to create profit?

Here is an executive paid $30,000 a year because his signature on a check is good for a credit line of a million dollars. Here is an executive who draws nearly double that because he can pick department heads, turn them loose with authority and keep them inspired, producing adequate profits in their departments. Here is another executive, loved by his fellows, a real friend to every man in his plant and on the road—no poser, not soft, but sympathetic and impartial and his concern makes real money. A similar plant in the same district just as well equipped physically, not handicapped by labor shortage barely gets by each year. Is this what Emerson meant when he said, "An institution is the lengthened shadow of a man"?

Here is an accounting executive, especially skilled by experience in cost work. He draws $25,000 per annum. For the past three years a large part of his time has been spent in filing refund claims for excessive taxes paid before he joined the company. Refunds already received will pay this executive's salary until he is over 60. Is the Company pleased? Yes and no. Yes for obvious reasons. No, because the executive's time is taken from work which the company wants done, work that looks to the future rather than digs up the past. "What journal entry will express in figures the production or sales to which each year's $25,000 applies?" I asked him. He grinned and said, "Well, the refunds get credited to Surplus; why not charge the salary there?" I grinned, too, and remarked, "You're too good a tax man, for one thing."

Telling the Whole Story

Production and distribution—the only functions of a business! A business organization is an entity. It must produce and it must distribute. It surely must, if it would survive. But good production, intelligent distribution, good accounts, intelligent management, all combine to bring about results that no accounts can record specifically. The results are shown, unmistakably shown, in the net profits. What else tells the whole story of a well established concern? Where else can you find expressed the value of gradually built goodwill? Where do you find expressed in figures a reputation for dependability of promises, promptness in filling orders, stability of product? Is it not true that a high-class purchasing agent can win friends for a concern, get deliveries of raw materials when the supply is scarce, make possible satisfied customers? This does not mean that part of the purchasing department expense should be applied to sales. It does mean that your accounts cannot possibly tell the whole story of your business. It does mean that you can go ahead and allocate administration expenses to lines of product. It means that you can make all the statistical analysis that you care to. It is all fine; it is all useful. But be modest in your attitude toward the extent of your statistical facts. Remember that the sales and particularly the administrative costs do differ in their nature from productive costs.

Remember that the reason that standards can be used in manufacturing costs is because in some industries you have standardized operations where a standard operating effort should produce a specific productive result. This makes it possible for management to focus its attention on the variances from established standards.

Sales effort may become truly standardized in the future. I am not prophet enough to say that it will not. But so long as reputation is cumulative, so long as past effort influences present sales, so long as the same salesman can produce in one hour ten times as much as he produces in some other hour, so long as some intelligent sales effort remains costly and unproductive, just so long will the problem of distributing selling costs vary in its nature from the problem of determining manufacturing costs.

Administrative Effort Illusive

Administrative effort, in my opinion, will remain even more illusive. The hours each week that some executives spend in signing checks will never be comparable on a time or value basis with the five minutes of creative vision that will influence production methods, sales effort, or form of organization. What difference does it make when such work is done? In bed, wide-eyed; on the seventh green, linx-eyed; at the nineteenth hole, pop-eyed—who knows, who cares? Men who are thinking and planning know no time clock limitations to their thought.

Analysis of expenditures will never specifically allocate the value of each dollar of administration cost. It will never record the value of pit-falls avoided. It will never record the value of an inspired organization where work is earnest, where loyalty is earned, where pride in product makes itself felt by every customer. These things are not disclosed by the mere statement that executives' salaries have dropped from 16 per cent to 11.9 per cent of cost of goods sold.

I have purposely refrained from defining "Administration." It matters not how you define it, the functions that I have outlined are present in varying degrees in every organization. I have purposely refrained from giving specific illustrations of how these

costs have been distributed. Many capable men are getting information of value. It is my hope that the discussion to follow will emphasize this phase of the work.

One question that is sure to come up I will comment on. Someone is sure to make the intelligent comment that you can only get these costs back through sales. I would add that you must as a general rule get them back through current sales. No company, no matter how amply financed, could indefinitely continue to make expenditures in excess of receipts no matter how much future business was in sight. Making current sales carry current expenditures is sound finance; making current effort far-sighted enough to produce future sales is sound business judgment. Making each product or each line of product carry a proportion of all current expenditures is sound policy.

Analyzing expenditures, however, and distributing them with the idea of saying that this line cost so much to sell, this line cost so much to administer, this line took 18 per cent of our executive effort and that 28 per cent of our executive's time was spent on 1928 production plans—this type of information, valuable though it may prove to be, paints a very incomplete picture of why sales are made, why administration is effective, why net profits are earned.

Realize Limits of the Job

My plea is that you do not get wrapped up in your white paper and red lines; that you realize the limits of your job; that you keep your accounts in their limits. You can tell accurately what you spend money for and why you spend it. You can tell why you spend some of it and when you benefit from it. There are, however, many expenditures, the value of which cannot be expressed in figures, the benefit cannot be measured in days, or months or sometimes years. Every executive knows that this is so, every accountant should bear it in mind.

A few weeks ago I was speaking to a man who has had a very extensive experience with foremen. In the course of our talk he exclaimed, "Foremen don't think straight, they do things with their hands, they think in circles. When you get a foreman who can think straight, you make him a superintendent."

Are accountants prone to think in figures? Do facts and data get to their mental objective? When you find an accountant who sees industry as conceived, conducted, controlled by men, "essentially personal, and inherently one of co-operation and service," you can make of him an executive whose salary as part of administration cost will continue to worry the statistical accountant who wants to allocate it to specific production or sales.

News Print Freight Rates Unreasonable

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 7, 1926.—Rates on news print paper in carloads from Merrill, Wis., and other producing points in Wisconsin and from points of production in Minnesota to Keokuk, Iowa, have not been found unreasonable but have been found unduly prejudicial by the Interstate Commerce Commission. The undue prejudice has been ordered removed but reparation has been denied. This decision was rendered in docket 16769 of the Keokuk Shippers' Association et al against the Belt Railway Company of Chicago.

T. V. Moross To Open in San Francisco

SAN FRANICSCO, Cal., July 2 1926.—T. V. Moross, formerly with Blake, Moffitt & Towne for over six years as fine paper salesman, is arranging to go into business with temporary office and warehouse at 61 Natoma street, carrying a stock of bonds, ledgers, writings and bristols to serve the printing and lithographing trade.

Mr. Moross was formerly an architect and building superintendent and has been identified with large buildings on the Pacific coast. He is well known in San Francisco and Northern and Central California, and a resident for over 30 years.

Progress in Standardizing of Tissue Paper

The Division of Simplified Practice of the Department of Commerce is soon to issue, through the Government Printing Office, a booklet giving the complete standardization of Tissue Paper, the history of the movement and full details uptodate, listing over 85% of the industry who have so far endorsed this movement.

The fact that a mill's name may not appear upon this list need not imply that they are opposed to it, only at the present time they are making certain lines which do not conform to these standards. All of those who have hesitated about endorsing the standards with the Government have stated that they hoped eventually to have all of their lines conform to the Governmnt standardization.

All sheet tissue paper will carry the official Association label stating that the paper is in conformance with the guaranteed standard size and count of Recommendation No. 46 of the United States Department of Commerce, and likewise all rolls of toilet paper will bear the official Association seal stating that its size and count conform with the Government's recommended standard.

There is also a vigorous movement on foot, both in New York, Chicago and elsewhere, by the merchants and the manufacturers, to eliminate 400 sheets and establish 480 sheets as a standard ream for sheet tissue paper.

So far as the Government standardization of tissue paper is concerned it has gone through much more smoothly than was ever anticipated, and all the manufacturers and merchants are very enthusiastic about it. The National Paper Trade Association is advocating it strongly through all of its local organizations and is doing everything possible to assist in having the consumer appreciate the desirability of this elimination of waste, improvement of service, and guaranteed size and count on all grades of tissue paper.

H. M. Gimlin Leaves Hawthorne Paper Co.

KALAMAZOO, Mich., July 6, 1926.—Horace M. Gimlin, vice president of the Hawthorne Paper Company and for the past nine months connected with that concern, largely in the capacity of director of sales, has tendered his resignation to take effect immediately. He will go to San Francisco as Pacific Coast representative of one of the important writing paper mills at Dalton, Mass. Mrs. Gimlin and daughter, Mrs. Eunice Gimlin Luft, will leave for their new home July 12.

Mr. Gimlin came to Kalamazoo originally, owing to his intimate association and friendship for the late A. H. Dwight. Since the death of the latter, he has intimated that the more or less unsettled condition of the industry made his change of position desirable.

"We regret Mr. Gimlin's decision to leave us" remarked C. H. Kleinstuck, vice president and chairman of the board. We consider him a very capable man in his line. The board has as yet taken no action to name a successor."

Great Future as News Print Center

The Hon. James Lyons, of Sault Ste. Marie, Ont., former Minister of Lands and Forests for Ontario, was in Fort William recently. He said that, within the next three years, 2,000 tons of news print paper would be appearing daily from the mills of Fort William and Port Arthur. He added that the citizens should not think that the present developments which they saw, together with the extensions to existing mills, are all that is going to be developed in the Thunder Bay district. Other mills were coming. Asked for further particulars, the Hon. Mr. Lyons said he was not at liberty to say any more just now. It is understood that his visit to Port Arthur and Fort William was in connection with the establishment of a new industry, the plans of which are still in the embryo state.

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JULY 3, 1926

SUMMARY

Cigarette paper .....3359 cs.
Wall paper .....8 bls., 7 cs.
Paper hangings .....51 bls.
News print .....1824 rolls
Printing paper .....9 bls., 115 cs.
Tissue paper .....25 cs.
Filter paper .....14 cs.
Wrapping paper .....49 rolls, 63 bls., 84 cs.
Kraft paper .....198 rolls
Packing paper .....196 cs.
Tracing paper .....26 cs.
Pergamyn paper .....29 cs.
Baryta coated paper .....84 cs.
Metal coated paper .....2 cs.
Basic paper .....1 cs.
Surface coated paper .....212 cs.
Fancy paper .....10 cs.
Envelopes .....2 cs.
Drawing paper .....49 cs.
Writing paper .....35 cs.
Trunk paper .....6 cs.
Parchment paper .....1 cs.
Stencil paper .....34 cs.
Crepe paper .....1 cs.
Cover paper .....6 cs.
Silk paper .....2 cs.
Colored paper .....15 cs.
Printed paper .....13 cs.
Photo paper .....2 cs.
Transfer paper .....3 cs.
Decalcomania paper .....12 cs.
Paper spools .....61 cs.
Wall board .....40 cs.
Strawboard .....362 rolls
Miscellaneous paper.....1398 rolls, 93 bls., 39 cs.

CIGARETTE PAPER

Standard Products Corp., Schodack, Havre, 180 cs.
Standard Products Corp., Paris, Havre, 120 cs.
Liggett & Myers Tobacco Co., Paris, Havre, 26 cs.
American Tobacco Co., Collamer, Bordeaux, 900 cs.
R. J. Reynolds Tobacco Co., Collamer, St. Nazaire, 1600 cs.
De Manduit Paper Corp., Collamer, St. Nazaire, 447 cs.
P. J. Schweitzer, Pres. Polk, Marseilles, 86 cs.

WALL PAPER

F. J. Emmerich, Deutschland, Hamburg, 3 bls.
Bendix Paper Co., Deutschland, Hamburg, 7 cs.
F. J. Emmerich, Franconia, Liverpool, 5 bls.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnetonka, London, 51 bls.

NEWS PRINT

Parsons & Whittemore, Inc., Berlin, Bremen, 587 rolls.
Parsons & Whittemore, Inc., Republic, Bremen, 1237 rolls.

PRINTING PAPER

B. F. Drakenfeld & Co., Carinthia, Liverpool, 12 cs.
J. P. Heffernan Paper Co., Deutschland, Hamburg, 9 bls.
B. F. Drakenfeld & Co., Franconia, Liverpool, 11 cs.
Oxford University Press, Franconia, Liverpool, 5 cs.
Globe Shipping Co., Rotterdam, Rotterdam, 10 cs.
Japan Paper Co., Rotterdam, Rotterdam, 10 cs.
Martin & Bechtold, Republic, Bremen, 7 cs.
Keuffel & Esser Co., Cleveland, Hamburg, 60 cs.

TISSUE PAPER

F. C. Strype, Carinthia, Liverpool, 5 cs.
Meadows, Wye & Co., Franconia, Liverpool, 3 cs.
J. B. Mast & Co., Duilio, Genoa, 3 cs.
R. H. Macy & Co., Inc., Duilio, Genoa, 2 cs.
S. Gilbert, Rotterdam, Rotterdam, 3 cs.
Iwai & Co., Tsuyama Maru, Kobe, 4 cs.
Reiser & Co., Tsuyama Maru, Kobe, 5 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 8 cs.
Taiyo Trading Co., Tsuyama Maru, Nagoya, 6 cs.

FILTER PULP

A. Gusmer, Berlin, Bremen, 55 bls.

FILTER MASS

Mager, Sonderburg & Co., Republic, Bremen, 45 cs.

WRAPPING PAPER

E. Dietzgen & Co., Deutschland, Hamburg, 6 cs.
Blauvelt-Wiley Paper Manfg. Co., Gripsholm, Gothenburg, 39 rolls.
Globe Shipping Co., Zeeland, Antwerp, 63 bls., 10 rolls.
C. Dever, Republic, Bremen, 12 cs.
A. Price & Son, Wytnevalle, Rotterdam, 66 cs.

KRAFT PAPER

Arkell Safety Bag Co., Gripsholm, Gothenburg, 198 rolls.

PACKING PAPER

Schenckers, Inc., Deutschland, Hamburg, 50 cs.
Rohner & Gehrig Co., Deutschland, Hamburg, 56 cs.
Hensel, Bruckman & Lorbacher, Rotterdam, Rotterdam, 25 cs.
International Forwarding Co., Rotterdam, Rotterdam, 32 cs.
Zellerbach Paper Co., Rotterdam, Rotterdam, 33 cs.

TRACING PAPER

E. Dietzgen & Co., Deutschland, Hamburg, 12 cs.
E. Dietzgen & Co., Cleveland, Hamburg, 14 cs.

PERGAMYN PAPER

F. C. Strype, Cleveland, Hamburg, 29 cs.

BARYTA COATED PAPER

Globe Shipping Co., Berlin, Bremen, 35 cs.
Globe Shipping Co., Republic, Bremen, 49 cs.

METAL COATED PAPER

Hoole Service Co., Columbus, Bremen, 2 cs.

BASIC PAPER

Globe Shipping Co., Berlin, Bremen, 1 cs.

SURFACE COATED PAPER

Whiting & Patterson Co., Deutschland, Hamburg, 16 cs.
F. C. Zuhlke, Zeeland, Antwerp, 118 cs.
Gevaert Co. of America, Zeeland, Antwerp, 78 cs.

FANCY PAPER

Whiting & Patterson Co., Minnetonka, London, 5 cs.
Whiting & Patterson Co., Homeric, Southampton, 5 cs.

ENVELOPES

H. Reeve Angel & Co., Inc., Minnetonka, London, 2 cs.

DRAWING PAPER

Keuffel & Esser Co., Cleveland, Hamburg, 49 cs.

WRITING PAPER

S. Stern, La Savoie, Havre, 2 cs.
The Eleto Co., La Savoie, Havre, 9 cs.
Abraham & Strauss, Schodack, Havre, 2 cs.
W. J. Byrnes & Co., Schodack, Havre, 1 cs.
Japan Paper Co., Paris, Havre, 5 cs.
Globe Shipping Co., Paris, Havre, 2 cs.
Coenca, Morrisson Co., Paris, Havre, 7 cs.
Guibout freres, Paris, Havre, 7 cs.

TRUNK PAPER

P. H. Petry & Co., Deutschland, Hamburg, 6 cs.

PARCHMENT PAPER

S. Gilbert, Rotterdam, Rotterdam, 1 cs.

STENCIL PAPER

Arlac Dry Stencil Co., Cleveland, Hamburg, 34 cs.

CREPE PAPER

Globe Shipping Co., Rotterdam, Rotterdam, 1 cs.

COVER PAPER

International Forwarding Co., Cleveland, Hamburg, 6 cs.

SILK PAPER

Globe Shipping Co., Rotterdam, Rotterdam, 2 cs.

COLORED PAPER

C. W. Williams & Co., Zeeland, Antwerp, 15 cs.

PRINTED PAPER

P. C. Zuhlke, Zeeland, Antwerp, 13 cs.

PHOTO-PAPER

J. J. Gavin, Celtic, Liverpool, 2 cs.

TRANSFER PAPER

Atlantic Forwarding Co., Republic, Bremen, 3 cs.

DECALCOMANIA PAPER

C. W. Sellers, Columbus, Bremen, 12 cs.

PAPER SPOOLS

Globe Shipping Co., Berlin, Bremen, 61 cs.

WALL BOARD

O. M. Baxter, Inc., Gripsholm, Gothenburg, 40 cs.

STRAW BOARD

A. Vuyk, Rotterdam, Rotterdam, 362 rolls.

MISCELLANEOUS PAPER

R. Wilson Paper Manfg. Co., California, Glasgow, 12 rolls.
S. E. & M. Vernon, Inc., Gripsholm, Gothenburg, 50 bls.
M. M. Cohen, Gripsholm, Gothenburg, 43 bls., 248 rolls.
The Borregaard Co., Inc., Gripsholm, Gothenburg, 1138 rolls.
H. D. Catty & Co., Zeeland, Antwerp, 32 cs.
The Bankograph Co., Paris, Havre, 2 cs.
Japan Paper Co., Paris, Havre, 1 cs.
J. R. Livermore, Pres. Polk, Genoa, 4 cs.

RAGS, BAGGINGS, ETC.

A. W. Fenton, Inc., California, Glasgow, 161 bls. rags.
Chase National Bank, California, Glasgow, 40 bls. rags.
Chase National Bank, California, Glasgow, 29 bls. bagging.
Central National Bank, California, Glasgow, 64 bls. bagging.
Brown Bros. & Co., California, Glasgow, 89 bls. rags.
Central National Bank, Lancastria, Southampton, 246 bls. rags.
A. W. Fenton, Inc., Oregon Maru, Hamburg, 317 bls. rags.
Goldman, Sachs & Co., Berlin, Bremen, 39 bls. rags.
Phila. Girard National Bank, Columbia, Venice, 45 bls. rags.
Manufacturers Trust Co., Caucasier, Antwerp, 37 bls. rags.
Royal Manfg. Co., Caucasier, Antwerp, 22 bls. thread waste.
Anglo-South American Trust Co., Caucasier, Antwerp, 136 bls. flax waste.
A. W. Fenton, Inc., Deutschland, Hamburg, 108 bls. rags.
E. J. Keller Co., Inc., Deutschland, Hamburg, 83 bls. bagging.
S. Silberman & Co., Deutschland, Hamburg, 170 bls. rags.
Chase National Bank, Deutschland, Hamburg, 69 bls. rags.
Equitable Trust Co., La Savoie, Havre, 52 bls. rags.
Chatham Burlap Bag Co., Rotterdam, Rotterdam, 300 bls. bagging.
J. M. Jaffe, Cabo Tortosa, Marseilles, 4 bls. rags.

(Continued on page 72)

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BUENA VISTA VIRGINIA
Samples and Prices upon application

Imports of Paper and Paper Stock

(Continued from page 70)

Robert Blank, Cabo Tortosa, Marseilles, 21 bls. rags.
Chase National Bank, Cabo Tortosa, Genoa, 54 bls. bagging.
Bowery East River National Bank, Cabo Tortosa, Genoa, 185 bls. rags.
Royal Manfg. Co., Cabo Tortosa, Genoa, 54 bls. bagging.
Royal Manfg. Co., Timavo, Genoa, 40 bls. bagging.
D. M. Hicks, Schodack, Havre, 24 bls. rags.
S. Silberman & Co., Schodack, Havre, 131 bls. rags.
Atlas Waste Manfg. Co., Schodack, Havre, 21 bls. rags.
Leshner Paperstock Co., Schodack, Havre, 191 bls. rags.
Smart & Toon, Schodack, Havre, 69 bls. bagging.
Equitable Trust Co., Zeeland, Antwerp, 123 bls. flax waste.
Jaffe Products Corp., Siboney, Havana, 12 bls. rags.
D. M. Hicks, Tsuyama Maru, Kobe, 140 bls. rags.
Central National Bank, Chicago, Havre, 52 bls. rags.
National City Bank, Chicago, Havre, 59 bls. rags.
R. M. Gray, Inc., Celtic, Liverpool, 35 bls. rags.
H. D. Kaplan, Celtic, Liverpool, 2 bls. rags.
Royal Manfg. Co., Liberty, Dunkirk, 80 bls. cotton waste.
Castle & Overton, Inc., Liberty, Dunkirk, 57 bls. rags.
Robert Blank, Oklahoma, Havre, 50 bls. rags.
Brown Bros. & Co., Oklahoma, Havre, 112 bls. rags.
V. Galaup, Oklahoma, Havre, 30 bls. rags.
National City Bank, Oklahoma, Havre, 130 bls. rags.
S. Silberman, Collamer, Bordeaux, 324 bls. rags.
I. Heuerfeld & Co., Collamer, Bordeaux, 45 bls. rags.
M. M. Liebowitz & Co., Collamer, Bordeaux, 4 bls. rags.
The Stone Bros. Co., Inc., Collamer, St. Nazaire, 138 b.s. rags.
A. W. Fenton, Inc., Cleveland, Hamburg, 51 bls. rags.
M. Maier Papermill Supply Co., Cleveland, Hamburg, 134 bls. rags.
Castle & Overton, Inc., Cleveland, Hamburg, 26 bls. rags.
S. Silberman & Co., Cleveland, Hamburg, 154 bls. rags.
A. W. Fenton, Inc., Wytheville, Rotterdam, 409 bls. rags.
Robert Blank, Wytheville, Rotterdam, 43 bls. rags.
Goschens & Cunliffe, Bronte, Manchester, 322 bls. rags.
Goschens & Cunliffe, Bronte, Manchester, 21 bls. bagging.
R. F. Downing & Co., Bronte, Manchester, 65 bls. rags.
L. H. Abenheimer, Bronte, Manchester, 68 bls. bagging.
True & McClelland, Bronte, Manchester, 50 bls. thread waste.
A. W. Fenton, Inc., Buyo Maru, Hamburg, 338 bls. rags.
S. Silberman & Co., Buyo Maru, Hamburg, 58 bls. rags.
D. M. Hicks, Buyo Maru, Hamburg, 32 bls. rags.
The Barrett Co., Buyo Maru, Hamburg, 188 bls. rags.
J. M. Labor & Co., Buyo Maru, Hamburg, 18 bls. rags.
A. W. Fenton, Inc., Geo. Washington, Bremen, 228 bls. rags.
Perry, Ryer & Co., Geo. Washington, Bremen, 49 bls. rags.
Robert Blank, Geo. Washington, Bremen, 43 bls. rags.
E. Mayer, Geo. Washington, Bremen, 143 bls. rags.
Chemical National Bank, Geo. Washington, Bremen, 73 bls. rags.

OLD ROPE

Central National Bank, Lancastria, Southampton, 131 coils.
Brown Bros. & Co., Bergensfjord, Oslo, 48 coils.
Brown Bros. & Co., Caucasier, Antwerp, 137 coils.
Brown Bros. & Co., Minnetonka, London, 151 coils.
Brown Bros. & Co., Cleveland, Hamburg, 30 coils.
Jaffe Products Corp., Siboney, Havana, 32 coils.
R. M. Gray, Inc., Celtic, Liverpool, 39 coils.

MANILA ROPE

Ellermans' Wilson Line, Minnetonka, London, 75 coils.
New York Cordage Co., Zeeland, Antwerp, 73 coils.
National City Bank, Celtic, Liverpool, 16 pkgs.

SUNN ROPE

New York Cordage Co., Zeeland, Antwerp, 70 coils.

WOOD PULP

E. M. Sergeant & Co., Bergensfjord, Drammen, 400 bls. sulphite pulp.
E. M. Sergeant & Co., Bergensfjord, Oslo, 475 bls. chemical pulp.
Tidewater Papermills Co., Bornholm, Sheet Harbor, N. S., 11,701 bls. wood pulp.
Price & Pierce, Ltd., Hjelmaren, Gothenburg, 4920 rolls wet pulp.
Johanson, Wales & Sparre, Inc., Casper, Hernosand, 990 bls. sulphite, 165 tons.
Johanson, Wales & Sparre, Inc., Casper, Hernosand, 1500 bls. sulphate, 250 tons.
Buck, Kiaer & Co., Inc., Deutschland, Hamburg, 525 bls. sulphate, 106 tons.
E. M. Sergeant & Co., Gripsholm, Gothenburg, 175 bls. sulphite.
Price & Pierce, Ltd., Gripsholm, Gothenburg, 480 rolls wet pulp.
Castle & Overton, Inc., Zeeland, Antwerp, 2096 bls. wood pulp.
Bulkley, Dunton & Co., Wytheville, Rotterdam, 300 bls. wood pulp, 62 tons.
Castle & Overton, Inc., Wytheville, Rotterdam, 375 bls. wood pulp, 60 tons.
J. Anderson & Co., Buyo Maru, Hamburg, 1827 bls. wood pulp, 365 tons.
Central Union Trust Co., Buyo Maru, Hamburg, 253 bls. wood pulp, 51 tons.
National City Bank, Buyo Maru, Hamburg, 400 bls. wood pulp, 80 tons.
Bank of Italy, Buyo Maru, Hamburg, 700 bls. wood pulp, 106 tons.
Sanitary Textile Corp., Cleveland, Hamburg, 121 bls. wood pulp.

WOOD PULP BOARDS

Fibre Case & Novelty Co., Gripsholm, Gothenburg, 86 bls.

WOOD FLOUR

A. Kramer & Co., Inc., Rotterdam, Rotterdam, 400 bags.
The Bakelite Corp., Wytheville, Rotterdam, 675 bags.

CASEIN

Brown Bros. & Co., Primero, Buenos Aires, 667 bags, 40,000 kilos.
New York Trust Co., Collamer, Bordeaux, 105 bags, 8147 kilos.
T. M. Duche & Sons, Collamer, Bordeaux, 201 bags, 15,016 kilos.
T. M. Duche & Sons, Lassell, Buenos Aires, 417 bags.

PHILADELPHIA IMPORTS

WEEK ENDING JULY 3, 1926

Congoleum Nairn Co., Cabo Tortosa, Marseilles, 129 bls. rags.
National Bank of Commerce, Cabo Tortosa, Marseilles, 326 bls. rags.
Stephano Bros., Schodack, Havre, 5 cs. cigarette paper.
The Stone Bros. Co., Inc., Schodack, Havre, 35 bls. bagging, 217 bls. rags.
The Stone Bros. Co., Inc., Schodack, Havre, 41 bls. string waste.
S. Silberman & Co., Schodack, Havre, 39 bls. rags.
Castle & Overton, Inc., Schodack, Havre, 213 bls. rags.
J. M. Hagy Waste Works, Schodack, Havre, 81 bls. rags.
Central National Bank, Oklahoma, Havre, 71 bls. rags.
National Bank of Commerce, Oklahoma, Havre, 549 bls. rags.
Robert Blank, Oklahoma, Havre, 181 bls. rags.
State Bank, Oklahoma, Havre, 123 bls. rags.
Philadelphia Girard National Bank, Oklahoma, Havre, 234 bls. rags.
National City Bank, Oklahoma, Havre, 61 bls. bagging.
E. J. Keller Co., Inc., Collamer, St. Nazaire, 185 bls. rags.
A. W. Fenton, Inc., Collamer, Bordeaux, 122 bls. rags.
Katzenstein & Keene, Inc., Collamer, Bordeaux, 109 bls. rags.
Castle & Overton, Inc., Collamer, Bordeaux, 362 bls. rags.
Castle & Overton, Inc., Blydendyk, Belgium, 231 bls. rags.
Castle & Overton, Inc., Blydendyk, Belgium, 734 bls. wood pulp.
Castle & Overton, Inc., Tomalva, Holland, 96 bls. rags.
Castle & Overton, Inc., Tomalva, Holland, 662 bls. wood pulp.
Castle & Overton, Inc., Seattle Spirit, Germany, 52 bls. rags.

PORTLAND, ME., IMPORTS

WEEK ENDING JULY 3, 1926

Waterfalls Paper Mills, Hjelmaren, Gothenburg, 2375 bls. wood pulp.
The Borregaard Co., Inc., Hjelmaren, Gothenburg, 2250 bls. wood pulp.
The Borregaard Co., Inc., Hjelmaren, Gothenburg, 194 bls. paper.

BALTIMORE IMPORTS

WEEK ENDING JULY 3, 1926

National Bank of Commerce, Oregon Maru, Hamburg, 416 bls. rags.
Chase National Bank, Oregon Maru, Hamburg, 105 bls. rags.
Central Union Trust Co., Oregon Maru, Hamburg, 242 bls. sulphite pulp, 49 tons.
Lagerloef Trading Co., Casper, Hango, 160 rolls wood pulp boards.
Johanson, Wales & Sparre, Inc., Casper, Hernosand, 900 bls. sulphite pulp, 152 tons.
Johanson, Wales & Sparre, Inc., Casper, Hernosand, 1500 bls. sulphate pulp, 254 tons.
E. M. Sergeant & Co., Casper, Hernosand, 2100 bls. sulphite pulp, 355 tons.
Pagel, Horton & Co., Inc., Casper, Ornskoldsvik, 2400 bls. sulphite, 406 tons.
Pagel, Horton & Co., Inc., Casper, Ornskoldsvik, 14,700 bls. sulphate, 2489 tons.
Pagel, Horton & Co., Inc., Casper, Norefors, 2400 bls. sulphite, 406 tons.
National City Bank, Oklahoma, Havre, 447 bls. rags.
Congoleum Nairn Co., Oklahoma, Havre, 100 bls. rags.
Baltimore Trust Co., Artigas, Manchester, 22 bls. rags.
W. H. Masson & Co., Artigas, Belfast, 57 bls. old rope.
Buck, Kiaer & Co., Inc., East Indian, Sikea, 4800 bls. sulphite pulp.
Castle & Overton, Inc., ——, Belgium, 767 bls. wood pulp.
Castle & Overton, Inc., Breedyk, Belgium, 1109 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING JULY 3, 1926

T. M. Duche & Sons, Lassell, Buenos Aires, 1001 bags casein.
Brown Bros. & Co., Lassell, Buenos Aires, 417 bags casein.
Scandinavian Pulp Agency, Inc. Hjelmaren, Gothenburg, 6096 bls. kraft pulp.
Scandinavian Pulp Agency, Inc., Hjelmaren, Gothenburg, 1524 bls. sulphite pulp.
The Borregaard Co., Inc., Hjelmaren, Gothenburg, 1875 bls. dry pulp.
Johanson, Wales & Sparre, Inc., Hjelmaren, Gothenburg, 500 bls. sulphate pulp.
J. Anderson & Co., Hjelmaren, Gothenburg, 250 bls. sulphite pulp.
Nashua Gummed & Coated Paper Co., Hjelmaren, Gothenburg, 147 bls. wrapping paper.
Wilkinson Bros. & Co., Inc., Hjelmaren, Gothenburg, 6 bls. wrapping paper.
E. J. Keller Co., Inc., Buyo Maru, Hamburg, 49 bls. rags.
Buck, Kiaer & Co., Inc., Pennsylvania, Greaker, 125 bls. sulphite pulp.
Buck, Kiaer & Co., Inc., Pennsylvania, Oslo, 200 bls. sulphite pulp.
Castle & Overton, Inc., ——, Belgium, 1658 bls. wood pulp.

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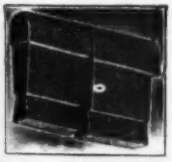

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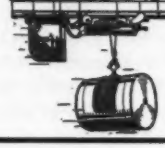

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New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, July 7, 1926.

Trading in the local paper market quietened down considerably during the past week, due to the holidays. The demand for the various grades of paper, however, was fairly satisfactory for the time of the year. Prices are generally holding up to previously quoted levels. Sales forces of the leading paper houses are still booking occasional good orders and no decided slump in business has been experienced so far this summer.

The news print market continues to exhibit a strong undertone. Production is still expanding, but is being absorbed by the publishers in a ready manner, and, consequently, accumulations are light. Due to the scarcity of offerings, the spot market is still very firm. Shipments of news print on contract are reported to be moving in good volume.

Demand for the various grades of paper board is improving slightly, and some observers of the market predict firmer prices in the near future. The fine paper market remains steady and prices are generally being well maintained. Tissues are in fairly good request. Most of the trading in the course paper market is routine, although the demand for seasonal specialties is excellent.

Mechanical Pulp

No important changes were recorded in the ground wood market during the past week. Production is proceeding in good volume, and supplies are gradually becoming more plentiful. Quotations are practically unaltered. Imported moist mechanical pulp is still selling at from $36 to $38 a ton, ex dock, and dry at from $37 to $40 a ton. Domestic mechanical pulp is quoted at from $30 to $33 a ton, f.o.b. mill, and Canadian ground wood at from $28 to $31 a ton.

Chemical Pulp

Despite the easier prices for chemical pulp which have prevailed during the last few weeks, the demand from the mills has not improved to any great extent, and the view is expressed in some quarters that customers are looking for even more concessions before filling their requirements. The position of the chemical pulp industry, however, is very sound, and both importers and domestic producers are optimistic over the future. Contract withdrawals are being maintained in good volume, and quotations are unaltered from last week's schedule.

Old Rope and Bagging

Both domestic and imported old rope are fairly active, and prices are generally holding up very well. Current offerings are reported to be quite ample to take care of the prevailing requirement. A moderate volume of inquiries are being received for bagging and some little improvement is anticipated by some observers of the market in the near future.

Rags

While no radical changes have been reported in the rag market, a better sentiment appears to be developing in both the foreign and domestic industry. The request for the various grades of roofing rags is very promising, and this section is in a more satisfactory position than for some time.

Waste Paper

Firmness still prevails in the local waste paper market, due mainly to the fact that packing operations are still below normal. The recent advances on strictly folded news and No. 1 mixed paper are being well maintained so far, while container board is still selling at from .60 to .65 and print at from .70 to .75. The demand for old kraft paper is said to be improving somewhat, while business in most of the other grades is mostly routine.

Twine

The twine market pursues the even current of its way, and most of the business being transacted at present is routine. Prices remain unchanged from the recently quoted levels. Leading authorities on the twine market express the view that a general expansion of the industry may be expected to begin in the fall of the year.

Paper Demand Fairly Good in Cleveland

CLEVELAND, July 6, 1926.—Although local paper houses have not yet finished the tabulation of sales figures for the first six months of 1926 it is known that most of the larger firms enjoyed a fairly good year and prospects for the remainder of the year are good.

Demand from Cleveland buyers continues to be below normal but it is expected that this will pick up with the settlement of the big building strike which now seems nearer. The latter part of 1925 was not as good for business as the first half and the paper houses expect easily to exceed those figures during the remainder of the current year but expect to do some intensive merchandise to hold business up to the fairly good months so far recorded during 1926.

Printers throughout this territory are not buying papers in as large quantities as usual. Book papers are active because of extensive advertising campaigns being conducted by the larger firms.

One gratifying condition right now is that the margin left for the jobbers is larger than last year when, in order to keep up volume it was necessary to reduce prices and cut into profits.

The paper box business is more active than usual at this season of the year and large factories are working on large orders for setup gift boxes for the larger Cleveland stores for the holiday season.

Windows of Window Envelopes

Check tests have been made with a window envelope manufacturer on determination of opacity of the windows with the Bureau of Standards apparatus. The first test showed considerable discrepancy between the two laboratories and upon further investigation this was found to be due to slight differences in the distances from the paper specimen to the white magnesia standards of the two sets of apparatus. When these distances were equalized very close checks were obtained. The other optical distances varied somewhat in the two sets of apparatus but these variations did not affect the results, the distance mentioned being the critical one as is pointed out in Bureau of Standards Circular No. 63 describing the apparatus.

Check tests were also made with the manufacturer on determination of gloss with the Ingersoll Glarimeter. Very close agreement was found, the individual variations being slight and the average figures for the eight windows being Bureau of Standards—79.69 per cent gloss, Manufacturer—79.63 per cent gloss.

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Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, July 7, 1926.

Notwithstanding the arrival of the holiday season, trading in the local chemical market was fairly active during the past week. Prices in the various sections of the industry have been well maintained, and the future outlook is decidedly promising. Contract withdrawals during June were said to have been better than in the corresponding month for several years past, and, while production has been on a large scale, all accumulations appear to have been readily absorbed, and surplus stocks are reported to be limited.

BLANC FIXE.—The tone of the blanc fixe market is firm, and while offerings are scarce, a good demand is being experienced for both the pulp and the powder for prompt shipment. The recent advance in prices is being well maintained in most instances. The pulp is quoted at $60 a ton, in bulk, and the powder at from 4¼ to 4½ cents a pound, in barrels, at works.

BLEACHING POWDER.—Steadiness continues to prevail in the bleaching powder market. Contract shipments are moving into consumption at an excellent pace, and prices are generally holding up to recently quoted levels. Bleaching powder is being offered for from $2 to $2.40 per 100 pounds, in large drums, at works, according to quantity.

CASEIN.—No radical changes developed in the casein market during the past week. The mills are reported to be only purchasing in small quantities, due to the high prices prevailing for spot supplies. Imported casein is unchanged at from 18 to 20 cents a pound, while domestic casein is quoted at from 17¼ to 20 cents a pound, all in bags.

CAUSTIC SODA.—The caustic soda market is practically unchanged. While production has been large for some time, stocks are not excessive. Contract shipments are still proceeding in good volume. Caustic soda is being offered for from $3.10 to $3.15 per 100 pounds, in large drums, at works. Spot car lots are selling at from $3.20 to $3.25 per 100 pounds.

CHINA CLAY.—The china clay market continues to display a steady tone, although the bulk of the business consists of shipments against contract. Prices on both the foreign and imported grades are being maintained at recently quoted levels. The price of imported china clay ranges from $13 to $22 a ton, in bulk, ship side, while domestic clay is offered at from $8 to $9 a ton, at mine, and pulverized at $10 a ton.

CHLORINE.—Trading in the chlorine market during the past week was mostly along routine lines. Production is being well maintained, and consumption is holding up very well for the time of the year. Chlorine is still quoted at 4 cents a pound, in tanks, or multi-unit cars, at works, on contracts, while the spot quotation is from 4¼ to 4¾ cents a pound.

ROSIN.—While the rosin supply is reported to be very small, the market continues to fluctuate unaccountably. The prevailing demand is rather light and prices have declined somewhat. At the naval stores, the grades of rosin used in the paper mills are now being offered at from $12.80 to $13.70 per 280 pounds, ex dock, in barrels.

SALT CAKE.—At the present time salt cake is the bright particular feature of the local chemical market. The demand is quite active and supplies are very difficult to secure, due to the scarcity of accumulations, while prices are very firm. Salt cake is quoted at from $18 to $20 a ton, in bulk, at works.

SODA ASH.—Contract shipments of soda ash are proceeding along normal lines. Leading manufacturers report that larger quantities of soda ash are being consumed than in any year since 1918, while the output is being absorbed in a satisfactory manner. Contract quotations, in car lots, at works, per 100 pounds, are quoted as follows: in bulk, $1.25; in bags, $1.38; and in barrels, $1.63.

STARCH.—The starch market is in a strong position. Demand continues to be steady and prices are well maintained. Shipments against contract are proceeding in excellent volume. Special paper makers' starch continues to sell at $3.32 per 100 pounds, in bags, and at $3.40 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Demand for sulphate of alumina is fairly persistent, considering the time of the year. Supplies on contract are moving in a normal manner and prices are practically unchanged. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.45, in bags, at works, in car lots, while the iron free is selling at from $2 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—The sulphur market continues to exhibit strength. A good volume of new business is reported to have been transacted during the past week, and supplies are moving into consumption at a satisfactory pace. Sulphur is still selling at from $18 to $19 a ton, in bulk, at mine, and at from $21 to $23 a ton, ship side.

TALC.—No new developments have been reported in the talc market, and most of the business being transacted at the present time is merely routine. Prices are holding up very well. Domestic talc is still quoted at from $15 to $18 a ton, at mine, and French talc at from $18 to $22 a ton, shipside.

Improved Demand Reported in Boston

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., July 6, 1926.—The advance guard of pessimists who last week declared that midsummer apathy had set in and that Boston's paper trade was "on the slide" this week were obliged to admit that they were a bit hasty in their judgement. It now appears that June has closed with a very fair record for itself, not quite up to June of last year but away ahead of May, this year. In other words the last month has been well above the standard and puts the first six months of 1926 on a far better basis than had been forecast.

Of course, July gets away to rather a poor start as it begins with a three-day-holiday, the business week not starting until Tuesday. Naturally there was nothing doing Saturday. But June is the month that interests the trade just now and a check-up of figures this past week shows a much more favorable condition than had been anticipated.

Two particularly bright spots were found—spots that have been rather dark for some time—the paper board division and the raw stock branch. Two prominent men in these respective branches told the writer this week that June was away ahead of May and that business still was coming in. The spokesman for the raw stock division said: "A little looks like a whole lot to us because it's been a long time since we enjoyed any business. Just now, and in the past two weeks, orders have been coming in steadily."

The paper board man said: "The business is coming along nicely. The mills are running capacity, despite several rumors to the contrary. The shoe business is picking up, according to various reports we get. The candy box orders are coming in and the textile centers will be in the market soon."

For the next week, however, there will be little if any business from the mills due to the fact that it is inventory time and no ordering will be done until all stock has been accounted for.

The fellow who is doing the real business just now is the tissue and summer specialty man. Boston dealers report one of the best seasons in years, despite the cold June. Paper cups, plates and other accessories for summer are in constant demand and the department stores and stationers are placing large orders.

The fine grades houses continue to do good business with a slight falling off being reported here and there.

Canals of Holyoke to Be Closed Aug. 30

HOLYOKE, Mass., July 6, 1926.—The annual shutdown of the canals of the Holyoke Water Power Company will take place July 30-August 2, it was announced last week by the Company. Manufacturers who use the canals are requested to make all their repairs during that period.